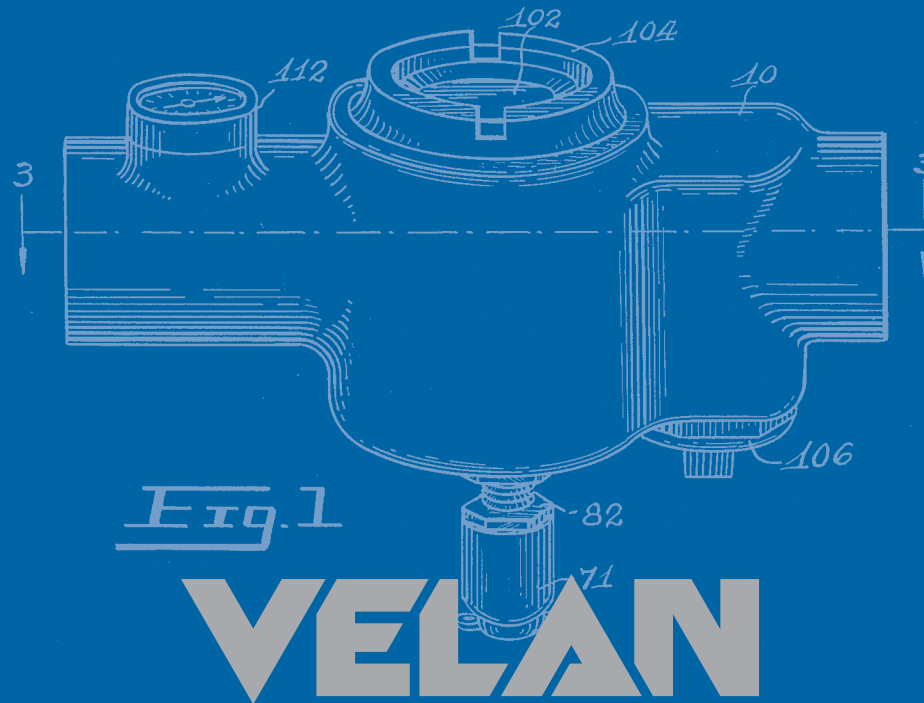


Feb. 24, 1953

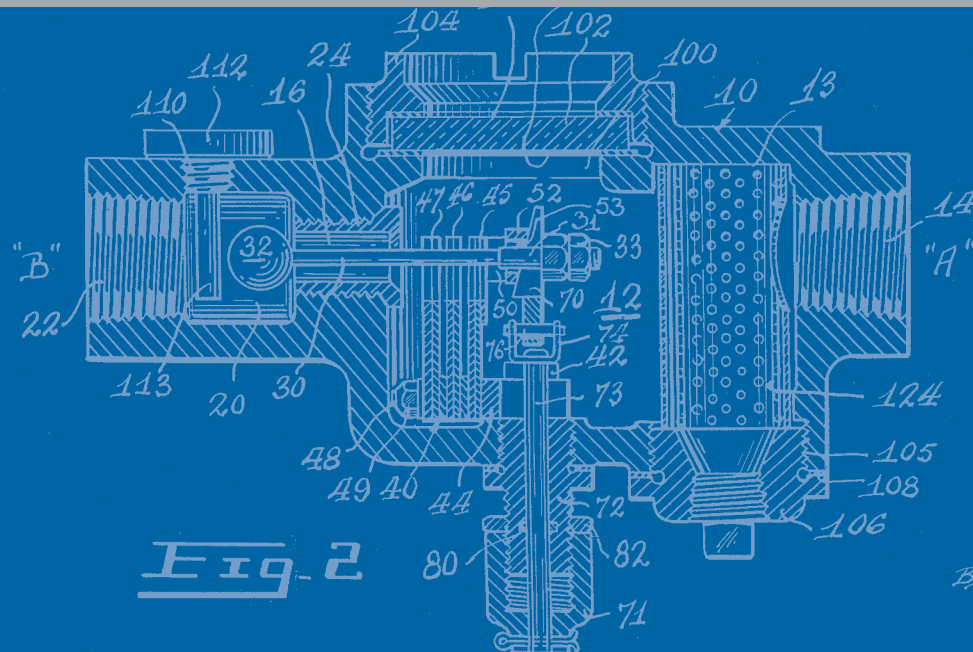
Filed Feb. 23, 1951

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A. K. VELAN
UNIVERSAL STEAM TRAP



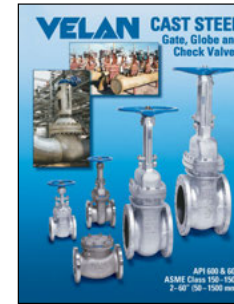
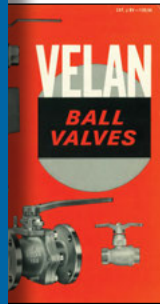
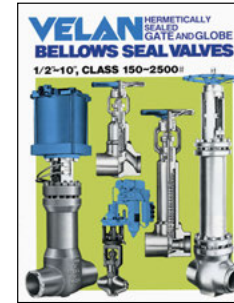
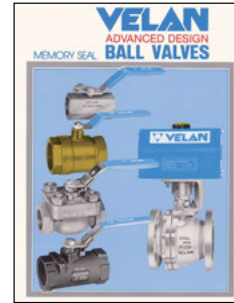
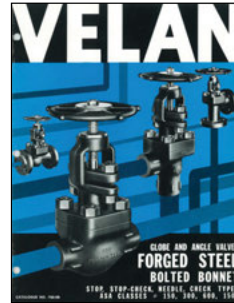
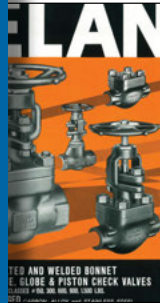
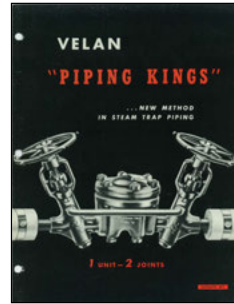
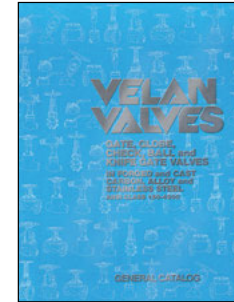
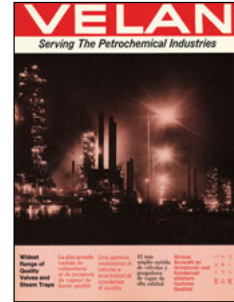
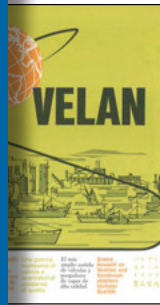
A PICTORIAL HISTORY



Inventor
Adolf K. Velan
By *Charles A. Sweeney*
Attorney

SOME FACTS ABOUT VELAN

- Velan celebrated its 60th anniversary in 2010.
- Velan was the first valve company to receive the ASME "N" stamp for nuclear valves.
- 2,500 Velan valves are in service in the world's largest machine, CERN's Large Hadron Collider.
- Velan has 17 production facilities worldwide across 10 countries.
- In 1996, Velan became a family controlled public company traded on the TSX.
- Velan was the first North American valve manufacturer to be certified to ISO 9001 in 1991.
- Velan valves are sold in more than 60 countries.



VELAN
ALL STAINLESS STEEL
KNIFE-GATE VALVES

VELAN CAST STEEL
Gate, Globe and
Check Valves

API 608 & 602 • ASME Class 150-1500 • 2" - 36" (DN - 1500 mm)

VELAN
One Piece Forged
Metal-Seat
Power Ball Valves

ASME CLASS 150-4500
Sizes: 1/2" - 4" (DN 15-100 mm)

For High Pressure/High Temperature Service In:
Power • Process

ANOTHER HIGH INTEGRITY VELAN VALVE

A world-leading valve product range

Velan. Quality that lasts.

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VELAN S.A.S.
High Performance Valves & Services

A world-leading valve product range

Velan. Quality that lasts.

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VELAN
Pressure Seal & Bolted Bonnet
Gate, Globe and
Check Valves

ASME Class 150-4500
Sizes: 2" - 24" (DN 50-600 mm)

The Only Source For Bolted Bonnet
High Pressure / Temperature Valves To 24" (600 mm)

VELAN
TORQSEAL™
Triple Offset, Metal-Seated
Butterfly Valves

Zero Leakage • Bi-Directional • Torque to API 607

Long Cycle Life • Available Performance

Proven Solution For:
Power Generation
Pulp & Paper
Oil Refineries
Chemical
Food Processing
Water Treatment
Air & Gas

Environmentally Friendly

SIZES: 3"-36"
(DN - 800 mm)

VELAN
KNIFE GATE VALVES

2" - 36" (DN - 900 mm) • All Stainless Steel

VELAN
TORQSEAL™
Triple-Offset Metal-Seated
Butterfly Valves

ASME Class 150-4500
Sizes: 3"-48" (DN 80-1200 mm)
Temperature: -40°F to 550°F (-40°C to 290°C)

• Zero Leakage • Bi-Directional • Torque to API 607

Cast steel valves
gate, globe, and check

ASME CLASS 150-1500
SIZES: 1/2" - 48" (DN 15-1200 mm)
API 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612

VELAN

Forged steel valves
gate, globe, and check

ASME CLASS 150-4500
SIZES: 1/2" - 4" (DN 15-100 mm)
API 602

VELAN

Forged steel bonnetless
Y-pattern globe valves

ASME CLASS 150-4500
SIZES: 1/2" - 4" (DN 15-100 mm)
API 602

Easy maintenance

VELAN

Knife gate valves

Pressure ratings up to 1500 psi
Sizes: API 3"-24" (DN 80-600 mm)
All stainless steel

VELAN

VELAN
MEMORY SEAL™
UNIBODY
BALL VALVES

10"-12" (15-300 mm)
ASME CLASS 150-300

In full compliance with:
ASME B31.3, B31.4, B31.5, B31.6, B31.7, B31.8, B31.9, B31.10, B31.11, B31.12, B31.13, B31.14, B31.15, B31.16, B31.17, B31.18, B31.19, B31.20, B31.21, B31.22, B31.23, B31.24, B31.25, B31.26, B31.27, B31.28, B31.29, B31.30, B31.31, B31.32, B31.33, B31.34, B31.35, B31.36, B31.37, B31.38, B31.39, B31.40, B31.41, B31.42, B31.43, B31.44, B31.45, B31.46, B31.47, B31.48, B31.49, B31.50, B31.51, B31.52, B31.53, B31.54, B31.55, B31.56, B31.57, B31.58, B31.59, B31.60, B31.61, B31.62, B31.63, B31.64, B31.65, B31.66, B31.67, B31.68, B31.69, B31.70, B31.71, B31.72, B31.73, B31.74, B31.75, B31.76, B31.77, B31.78, B31.79, B31.80, B31.81, B31.82, B31.83, B31.84, B31.85, B31.86, B31.87, B31.88, B31.89, B31.90, B31.91, B31.92, B31.93, B31.94, B31.95, B31.96, B31.97, B31.98, B31.99, B32.1, B32.2, B32.3, B32.4, B32.5, B32.6, B32.7, B32.8, B32.9, B32.10, B32.11, B32.12, B32.13, B32.14, B32.15, B32.16, B32.17, B32.18, B32.19, B32.20, B32.21, B32.22, B32.23, B32.24, B32.25, B32.26, B32.27, B32.28, B32.29, 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B46.32, B46.33, B46.34, B46

Feb. 24, 1953

2,629,553

Filed Feb. 23, 1951

A. K. VELAN
UNIVERSAL STEAM TRAP

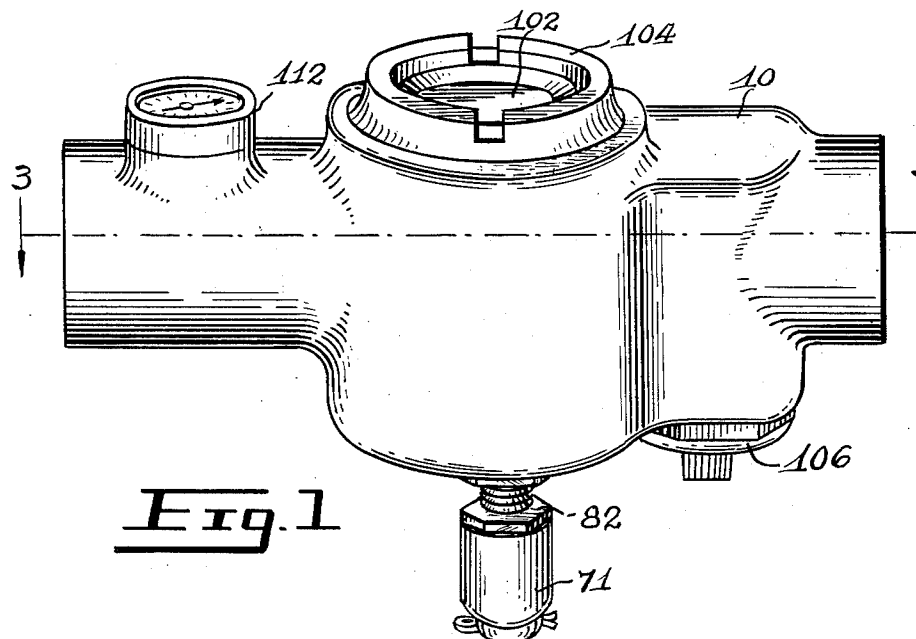


Fig. 1

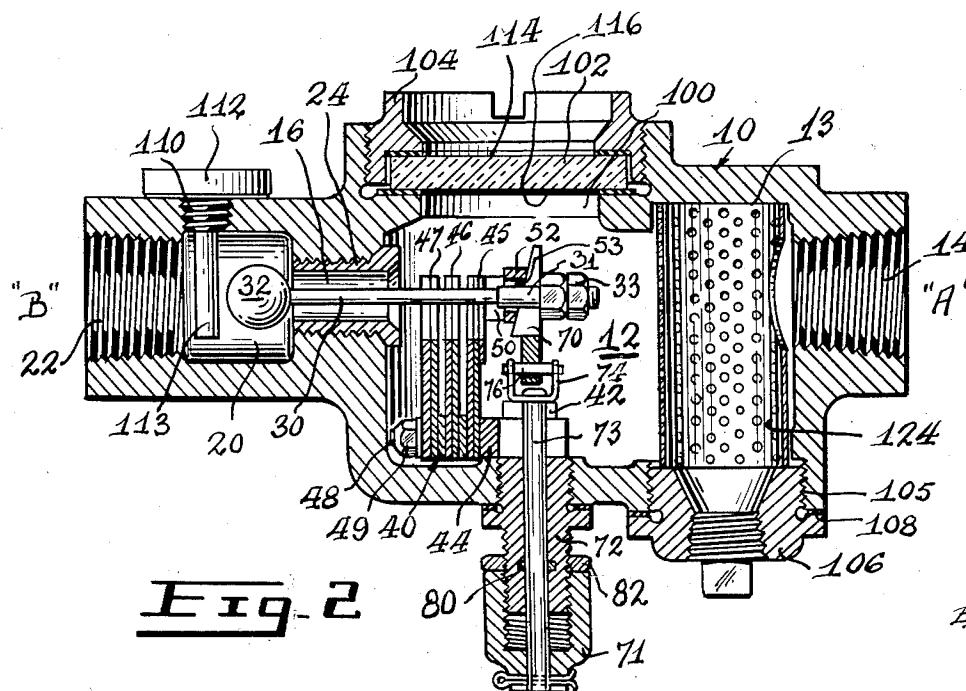


Fig. 2

Inventor
Adolf K. Velan
By *Edna A. Sweeney*
Attorney



A PICTORIAL HISTORY



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Second Printing

Printing: Impression Expo
Printed in Canada

Published by Velan Inc.
7007 Cote de Liesse
Montreal, QC, H4T 1G2, Canada
(514) 748-7743
www.velan.com

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To all the customers, partners,
distributors, suppliers, and employees
past, present, and future, who have
contributed to Velan's success
for more than 60 years.



In 1948, I escaped from Communist Czechoslovakia with my wife and two sons. A year later, we flew to Canada, where we were proud to become Canadians.

Shortly after coming to Montreal and inspired by a vision of how I could bring concrete technological change to the industry, I started the Velan Engineering Company (the original name for Velan Inc.). In the early days, our products were manufactured in a small factory during the day, tested on a boiler at Montreal's McGill University at night, and stored in and shipped from our garage in our house.

We have never looked back.

Today, the Velan family has grown to 41 people, including 12 grandchildren and 15 great grandchildren.

Being in business more than 60 years has taught me a few lessons about what it takes to build a company. The most important one is this: If you want to succeed, you have to give back. You have to give your best effort and, when things go your way, you must always remember to give back to those who have believed in you.

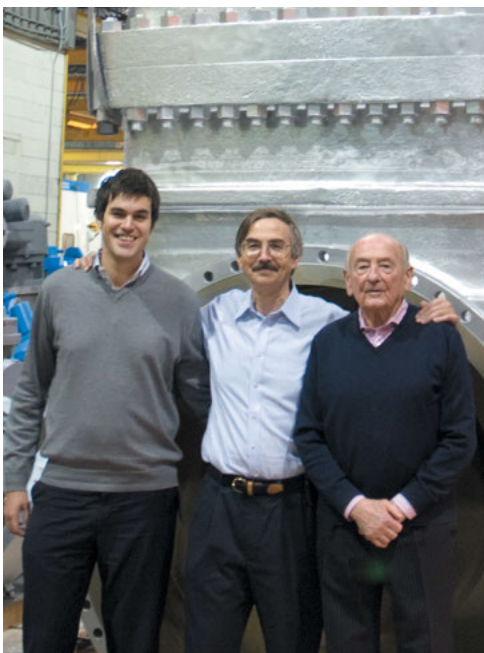
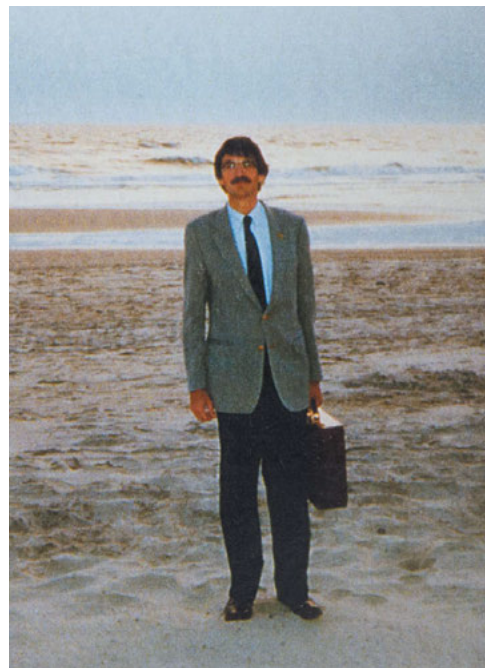
Thank you for your role in contributing to our ongoing success.



A.K. Velan

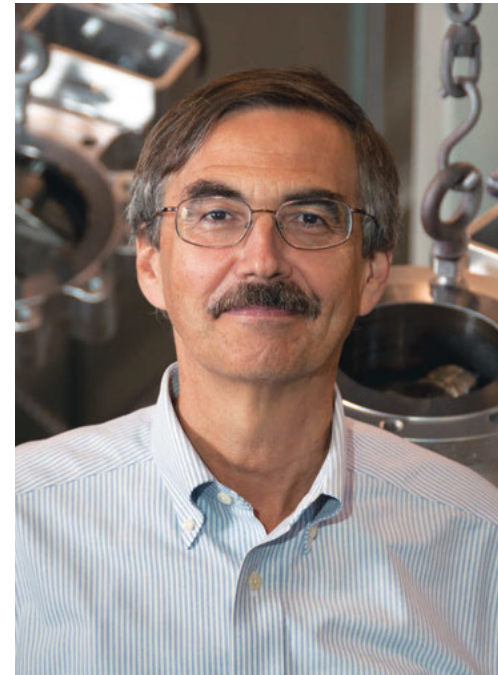
Founder and Executive Chairman of the Board, Velan





From the beginning of my work at Velan, I was focused on developing our international market and overseas subsidiary companies, while Ivan developed our distribution network and sales in North America, and Peter grew our production and engineering capabilities. Of course, in a family business, family members get involved in everything, and in the old days many decisions were made around the kitchen table in our house. Over the years, I traveled with my father on at least 50 international trips, and I think we worked very well together.

I joined the company in 1973 at a time when our sales were about \$15 million, and we had one overseas manufacturing plant in Leicester, England. It has been a great experience to see the company grow globally over the years. Today, I'm proud to be President and CEO of a company with more than 2,000 people working in 11 countries and generating sales of half a billion dollars. Our mission is "To be the world's leading valve brand," and we have all worked hard towards that goal.

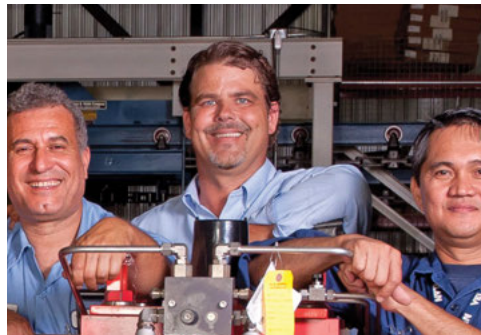


In this pictorial history, we want to celebrate our journey of more than six decades, beginning as a start-up operation with my father and mother packaging steam traps in their garage and evolving into a global valve manufacturer. While we have not been able to include every one of our employees, customers, distributors, agents, and suppliers in this book, we are grateful to each of you for being such an integral part of the Velan story. We wouldn't have this history to tell without you.

A handwritten signature in black ink, consisting of the letters 'T. Velan' in a stylized, cursive script.

Tom Velan
President and CEO, Velan

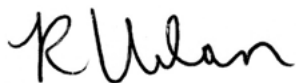
Velan. Quality that lasts.



As members of the third generation, we have all been exposed to the family business in countless ways. As far back as I can remember, my grandfather, A.K. Velan, would try to entice us at family gatherings into discussions about his new valve designs. During the summers, many of us would work in various capacities to learn about the business. Even though my first summer job, at age nine, was spent licking envelopes in the mailroom, I got a taste for what went on in the company and came to know many of the devoted employees. Some of them still work at Velan to this very day. All of the third-generation family members have worked at the company at some point in time, helping to contribute to the growth of the business.

Over time, Velan has grown from a start-up to a mid-sized company to a publicly traded corporation. We have put in place a strong management team and Board of Directors to guide us into the future. We have a deep understanding of the importance of our fiduciary responsibility to our shareholders.

The third generation has gained tremendous knowledge and experience working alongside our grandfather, fathers, uncles, siblings, and cousins, but we have learned even more from interactions with our many dedicated employees, customers, and suppliers. You have all become a critical part of the extended Velan family and, going forward, it is our collective responsibility to work together to ensure continued success.

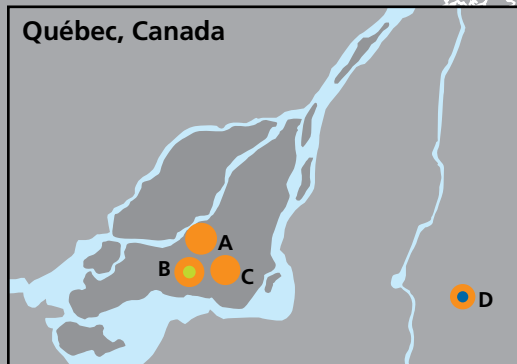


Rob Velan

VP, Distribution, Velan

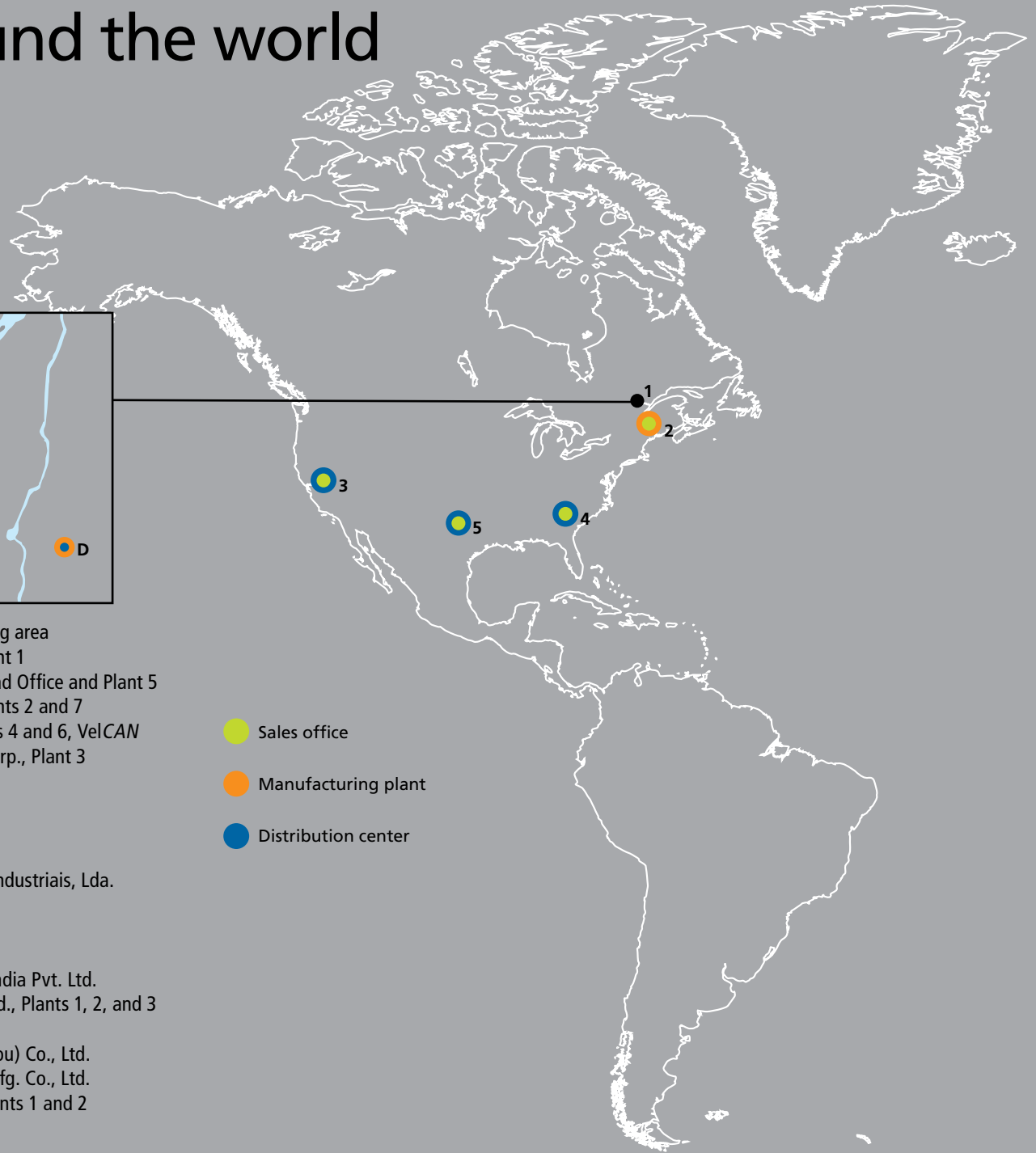


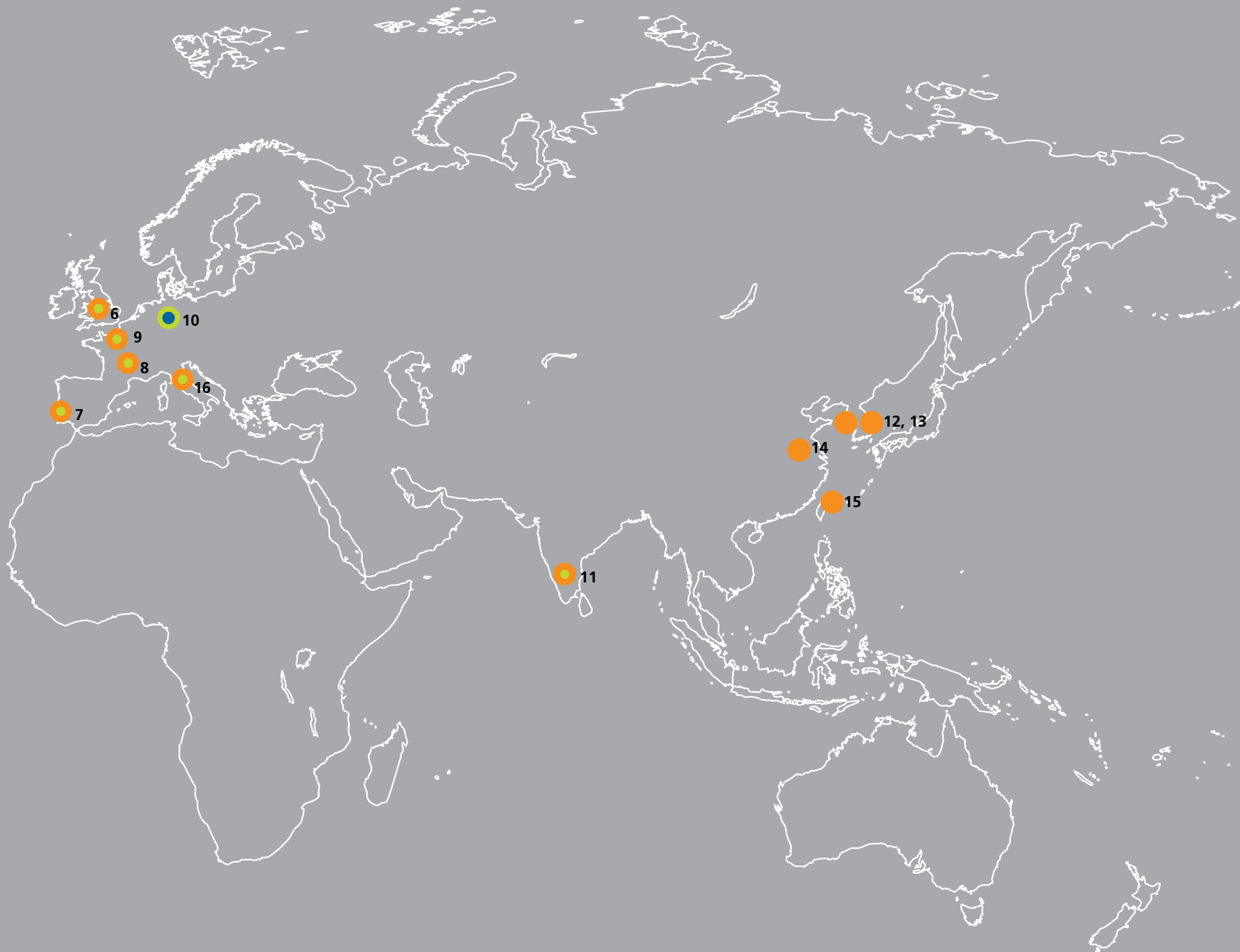
Velan around the world



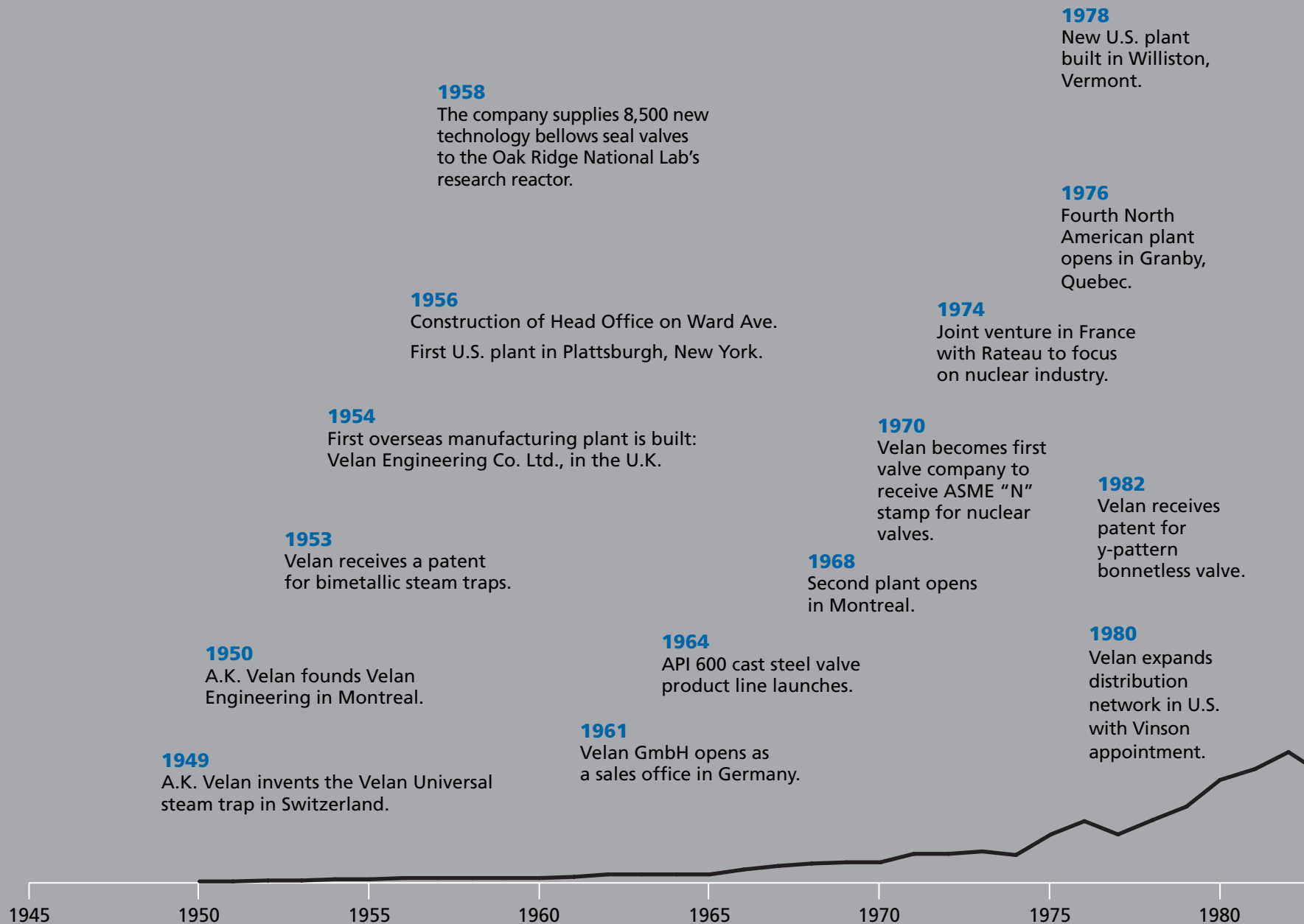
1. Detail of Montreal and surrounding area
- A. Montreal, Canada: Velan Inc., Plant 1
- B. Montreal, Canada: Velan Inc., Head Office and Plant 5
- C. Montreal, Canada: Velan Inc., Plants 2 and 7
- D. Granby, Canada: Velan Inc., Plants 4 and 6, VelCAN
2. Williston, VT, U.S.: Velan Valve Corp., Plant 3
3. Benicia, CA, U.S.: VelCAL
4. Marietta, GA, U.S.: VelEAST
5. Houston, TX, U.S.: VelTEX
6. Leicester, U.K.: Velan Valves Ltd.
7. Lisbon, Portugal: Velan Válvulas Industriais, Lda.
8. Lyon, France: Velan S.A.S.
9. Mennecy, France: Segault S.A.
10. Willich, Germany: Velan GmbH
11. Coimbatore, India: Velan Valves India Pvt. Ltd.
12. Ansan City, South Korea: Velan Ltd., Plants 1, 2, and 3
13. Busan, Korea: Juwon (foundry)
14. Suzhou, China: Velan Valve (Suzhou) Co., Ltd.
15. Taichung, Taiwan: Velan Valvac Mfg. Co., Ltd.
16. Lucca, Italy: Velan ABV S.p.A., Plants 1 and 2

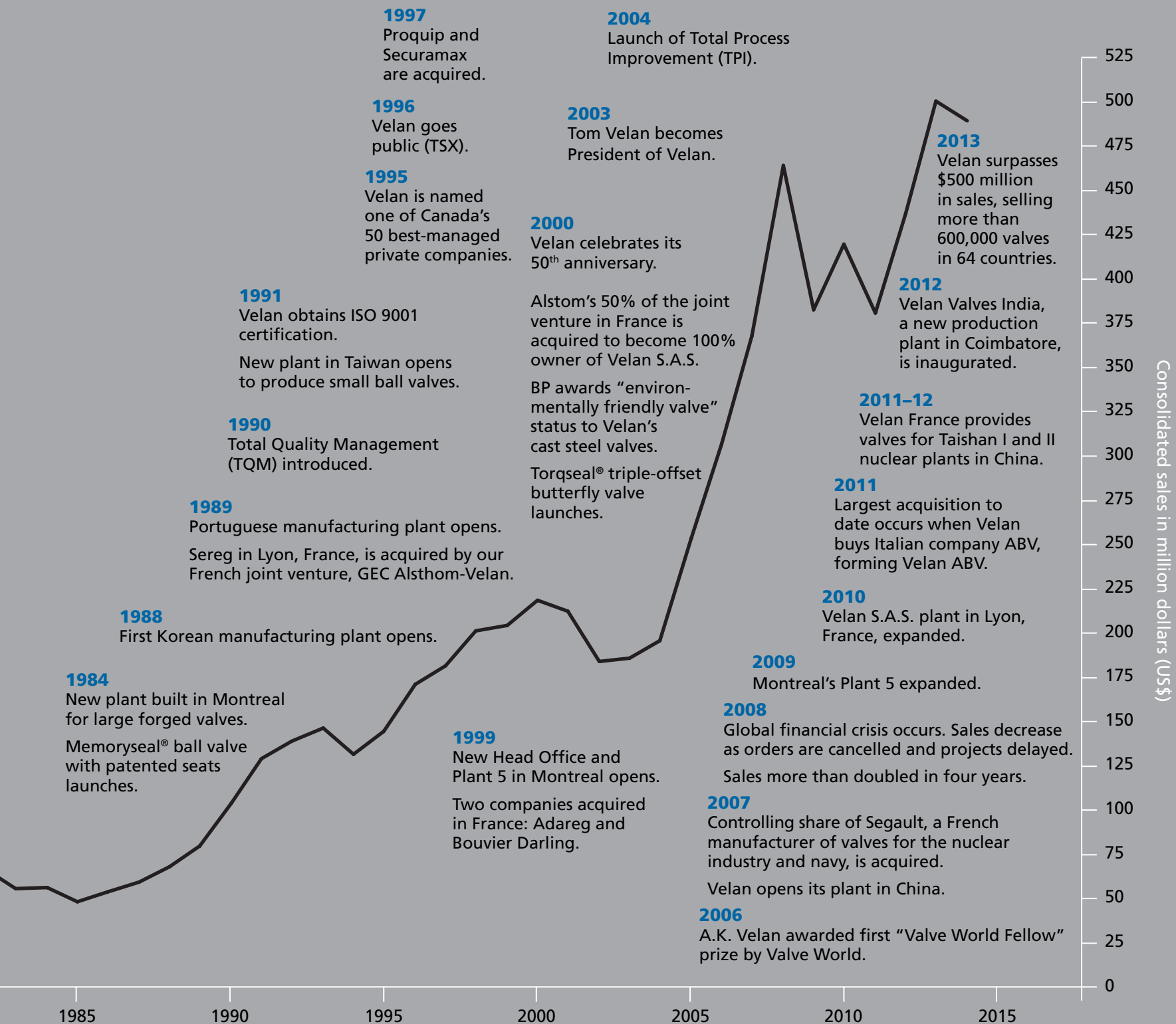
- Sales office
- Manufacturing plant
- Distribution center





Important dates







Assembly of Velan steam traps and small forged valves in Velan's Plant 1 on Ward Avenue. Steam traps were the company's first product line and represented the first Velan patent. Extracts from the original patent serve as the cover illustration.



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1950s

An international company from the start

A.K. Velan's invention of the company's patented Universal steam trap in the late forties and early fifties, combined with his global vision of an international production, distribution, and sales network, was the genesis of the company's success. Conceived in Czechoslovakia, designed and produced as a prototype in Switzerland, and first tested and manufactured on a shoestring budget in Canada, the steam trap, and soon after the Piping King, helped Velan gain the market traction needed to expand its product line into valves, the vast majority of its current sales.

From its earliest beginnings as Velan Engineering, the company forged links with distributors: first in England, followed by Norway, Sweden, the Middle East, India, Singapore, and Japan. Inventor, entrepreneur, world traveler, inveterate salesman, and dynamic pitchman, A.K. Velan brought the energy, enthusiasm, and values that started Velan off on the road to success.

LEFT: Plant 1 began operations with approximately 50 employees who produced a single product: the signature Velan steam trap. The demand for Velan steam traps increased steadily and A.K. Velan entered into a partnership with British Steam Specialties (BSS) of Leicester in the U.K., the largest distributor at that time. This led to substantial orders, and BSS stocked thousands of Velan steam traps.

RIGHT: Air travel in the 50s was a real adventure and very slow. This didn't stop A.K. Velan from travelling around the world to visit customers and appoint representatives. A.K. was a truly driven salesman, and one time he even managed to appoint two exclusive reps in California at the same time!



1950

A.K. Velan founds Velan Engineering

1953

Velan receives U.S. patent for bimetallic steam traps

1954

Velan establishes first overseas manufacturing plant, Velan Engineering Co., Ltd., in the U.K.

1956

The company opens a new manufacturing plant and Head Office in Montreal, to become known subsequently as Plant 1

1956

Velan opens first U.S. plant in Plattsburgh, New York

1958

The company supplies 8,500 new technology bellows seal valves to the Oak Ridge National Lab's research reactor

DEC 14 1950

8788
Credit-
MAN'S CONFIDENCE
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Dun & Bradstreet of Canada, Limited

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RATING
CHANGE

3821
VELAN ENGINEERING CO
VELAN, K ADOLF, OWNER

CD 33 DECEMBER 13 1950

ENGINEERING REPRESENTATIVE

MONTREAL 25 QUE

1216 DRUMMOND ST

(FRMLY) 2451 DEMONTIGNY ST E

RATING: — to C 2

SYNOPSIS

BACKGROUND: Started in this country in May, 1949. Owner is an experienced engineer.
NET WORTH: \$94,500 SALES: \$180,000 (Yearly estimate)
PAYMENTS: Prompt and cash
CONDITION & TREND: Strong condition exists with cash covering total indebtedness.
Volume increasing; profits realized.

HISTORY

The trade style was registered by the owner on May 23, 1949.
Adolf K. Velan, 32, separate as to property from his wife is a native of Czechoslovakia. He is a graduate of the University of Brun, Czechoslovakia as a mechanical engineer. In 1939 upon graduation became employed in his profession. In 1942 located in Switzerland, where he began experimenting on a special steam trap which was later patented. The article was well received the subject gradually expanded. Immigrated to this country in May 1949 and continued on in the same field. During 1949, Velan was interested in Javelin Industries Ltd., and was Secretary-Treasurer. That was a private company, engaged in the manufacturing of textiles and incorporated under Dominion Laws April 1949. However, in the early part of 1950 sold his interest therein for an undisclosed consideration.

OPERATION-LOCATION

Acts as an engineer engaged in the production of the "Velan Universal Steam Traps" which is a patented invention of the owner. Sales are to industrialists, distributors throughout Canada and the United States on terms of net 30 days. The actual manufacturing of the products is sub-contracted to others and presently all work is carried out by Southern Industries Ltd., Marieville, Que. There are five employees. Rents adequate office space and showroom on the second floor of this three-storey brick commercial building located on a secondary thoroughfare in the uptown commercial district of the City. Warehouse space is also maintained on Drummond St. General housekeeping is orderly.

FINANCIAL INFORMATION

On December 6, 1950, Velan, The President submitted the following estimates:-

ASSETS		LIABILITIES	
Cash in Bank	\$ 19,000	Accts. Pay.	\$ 3,000
Accts. Receiv.	20,000		
Merchandise	30,000		
		Total	3,000
Total Current	69,000		
Machy. & Fixts.	1,000		
Investments in Swiss Bank	25,000		
Autos	2,500	NET WORTH	94,500
Total Assets	97,500	Total	97,500

ANNUAL SALES estimated at \$180,000.

Signed December 5 1950 VELAN ENGINEERING CO by K.A. Velan.

In addition to the foregoing, Velan maintains a medium five-figure savings account and it was pointed out that the necessary capital is available from the owner should the enterprise require additional funds. As noted in the foregoing statement 100,000 Swiss Francs are deposited in the Credit Swiss Bank, Zurich, Switzerland. Many supplies are purchased in Europe, and the owner reported that by maintaining the foregoing account payments are made more rapidly.

Qualified sources consulted in outside quarters indicated that Velan possesses a clear record, and is well experienced in this line. He has steadily increased operations and through profitable investments, sale of interest in the Javelin Industries Ltd., sufficient capital is available for immediate and future requirements. Sufficient contracts are reported on hand and comment in all quarters were favourable

PAYMENTS
Dec 6 1950
Prompt
HC OWES P.DUE TERMS
1400 N 30
Cash
Cash

PLEASE NOTE WHETHER NAME, BUSINESS AND STREET ADDRESS CORRESPOND WITH YOUR INQUIRY
The foregoing report is furnished, at your request, under your Subscription Contract, in STRICT CONFIDENCE, by DUN & BRADSTREET, of Canada Ltd. as your agents
9R-4 (27703) and employees, for your exclusive use as an aid in determining the advisability of granting credit or insurance, and for no other purpose. C-117

In May 1949, A.K. Velan immigrated to Canada. A few months later, he received this letter of recommendation (below) from the Canadian Department of Trade and Commerce, to facilitate easier travel.

A year later, Dun and Bradstreet performed a credit check on A.K. (see to the left) and finds him fiscally sound, with estimated annual sales of \$180,000.



CANADA

DEPARTMENT OF TRADE AND COMMERCE

IN REPLY REFER TO FILE NO. 5-459

OTTAWA, Sept. 20, 1949.

TO WHOM IT MAY CONCERN:

This is to advise that Mr. A. K. Velan of the Velan Engineering Co., Montreal, P.Q., has recently come to Canada from Switzerland to set up a business in the manufacture and sale of special machinery. He is well known to the Department, and the Immigration Branch of the Department of Mines and Resources, and cooperation in the matter of arranging for travelling visas or other such requirements on his behalf will be appreciated.

Yours faithfully,

G. D. Mallory

G. D. Mallory,
Director,
Industrial Development Division.

GDM:V

My first office and manufacturing facility was on the second floor of a building on Jeanne Mance Street in Montreal. One of our earliest catalogs made in 1951 featured our steam trap and I highlighted the selling features right on the cover. These traps included a sight glass so users could look inside to see the trap operating. While I later eliminated this feature because the sight glass wasn't transparent for long in service, it still served its purpose to give early trap users the chance to see my patented bimetallic trap functioning.

Unfortunately we no longer have copies of my first catalog from 1950, which was titled "America's favorite steam trap." It compared the features of my new design with those of our long-established competitors. In the comparison, crosses were drawn through the competitors' traps to indicate that they were inferior to the Velan models.

At my first exhibition in New York, Mr. Armstrong of Armstrong, a manufacturer of steam traps, came to see me with a copy of my catalog. I was explaining how my trap was better than the rest and why crossing out the others was justified, but Mr. Armstrong said: "Young man, we don't do this kind of thing in America."

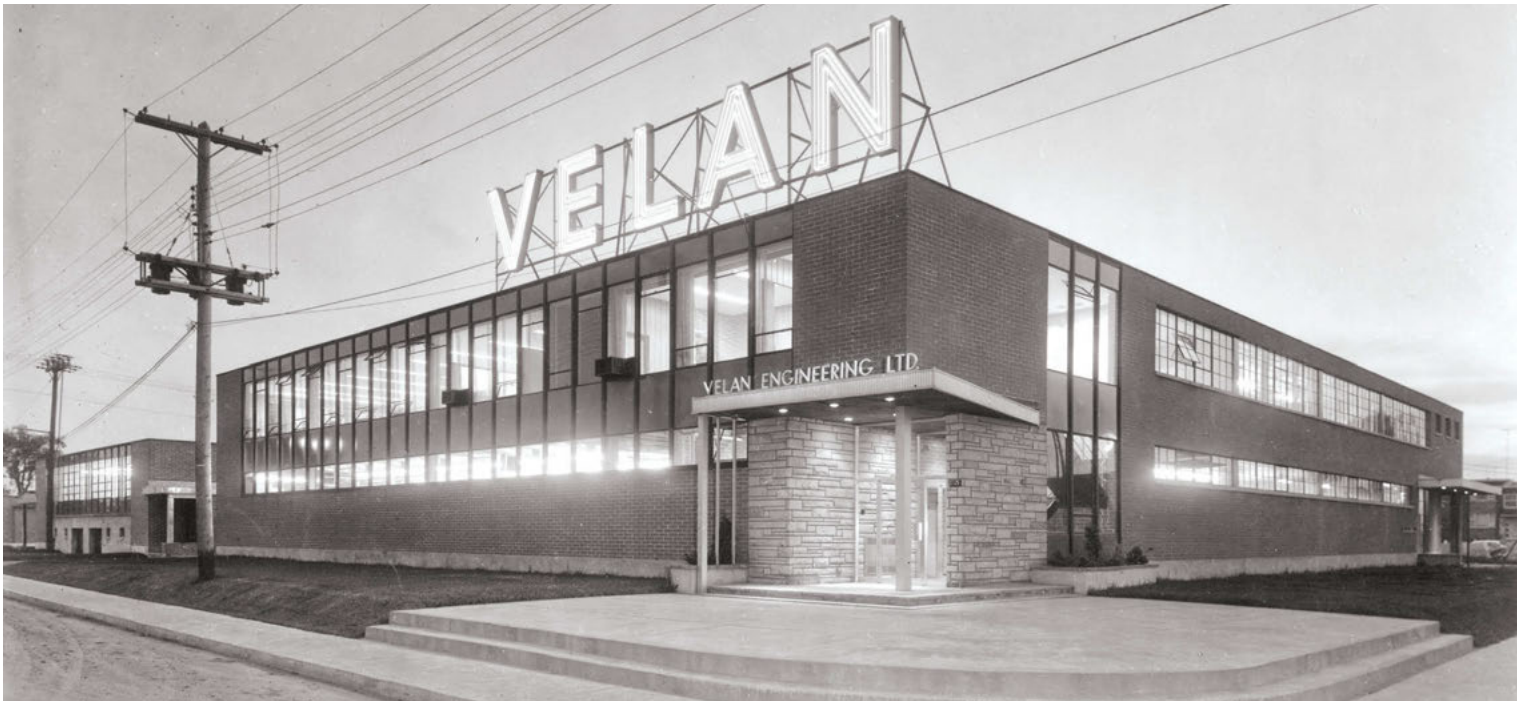
A.K. Velan



The first Velan production facility was located on the second floor of a building on Jeanne Mance Street in Montreal.

RIGHT: Naturally, one of the first Velan catalogs, produced in 1951, featured the company's patented steam traps. A.K. Velan understood the importance of good marketing and salesmanship from the company's earliest years.





Plant 1, shown above, was built in 1956.

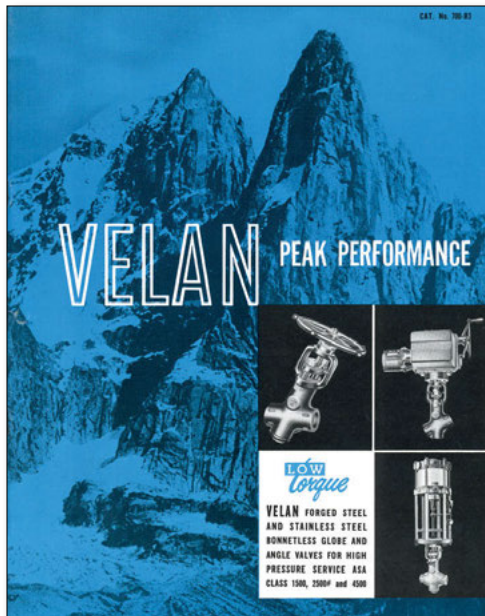


LEFT: A.K. Velan and the architect, who was also a Czech immigrant, visited the construction site on Ward Avenue in the Montreal suburb of Ville Saint-Laurent.

RIGHT: For the front entrance staircase of the original Head Office in Plant 1, A.K. Velan commissioned a mural painted by the architect's wife. The mural depicts the rise from manual labor to a highly automated future. Visitors to Plant 1 will still find this work in the lobby.







Velan bonnetless valve product catalog from the 1950s

LEFT: Testing and painstaking quality control have always been bywords at Velan. Research and Development (R&D) tests steam traps in this archival photo. Each steam trap was tested on this boiler.

RIGHT: Assembly of the bonnetless valves

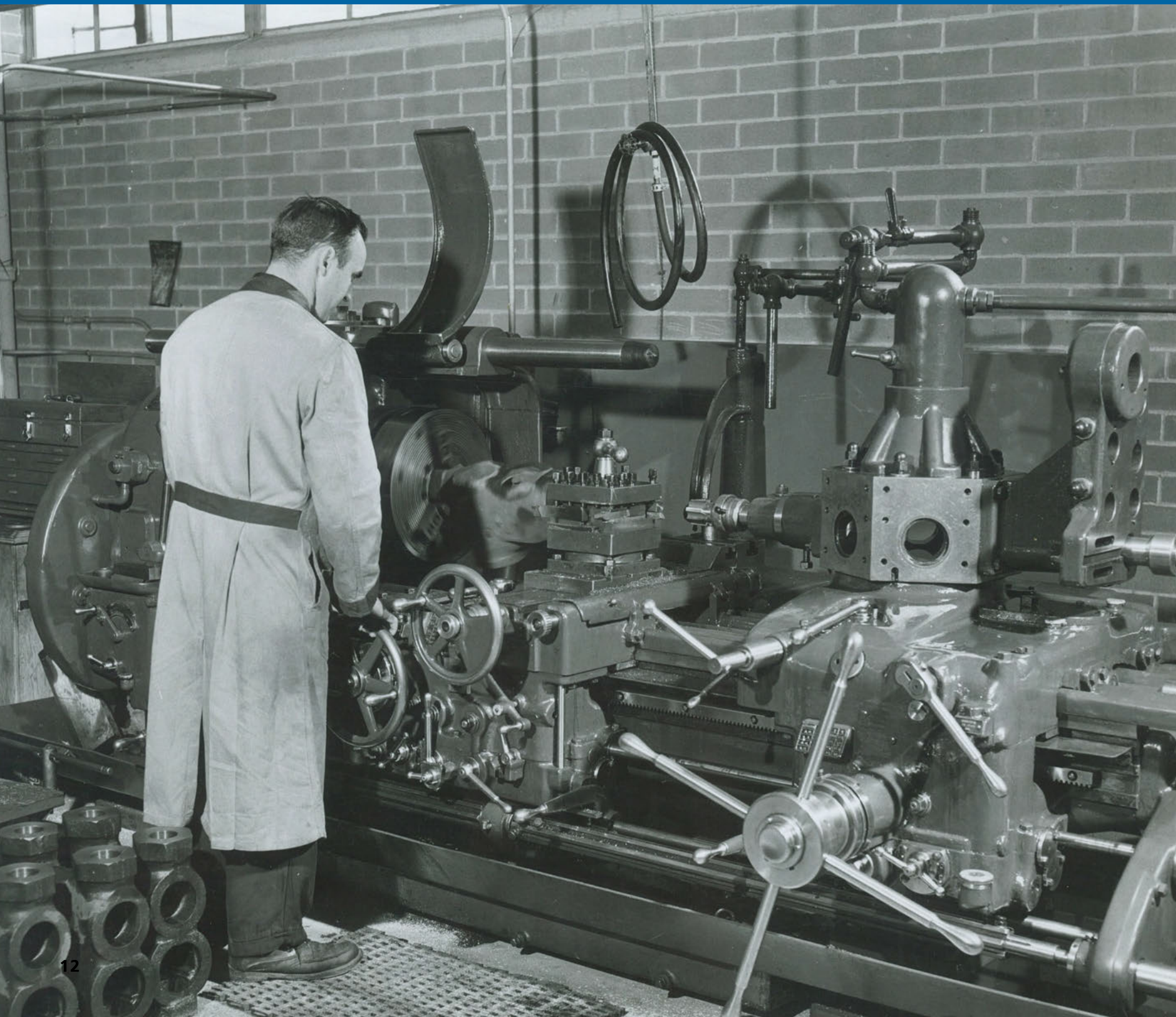






The Velan sales office in Plant 1, Montreal

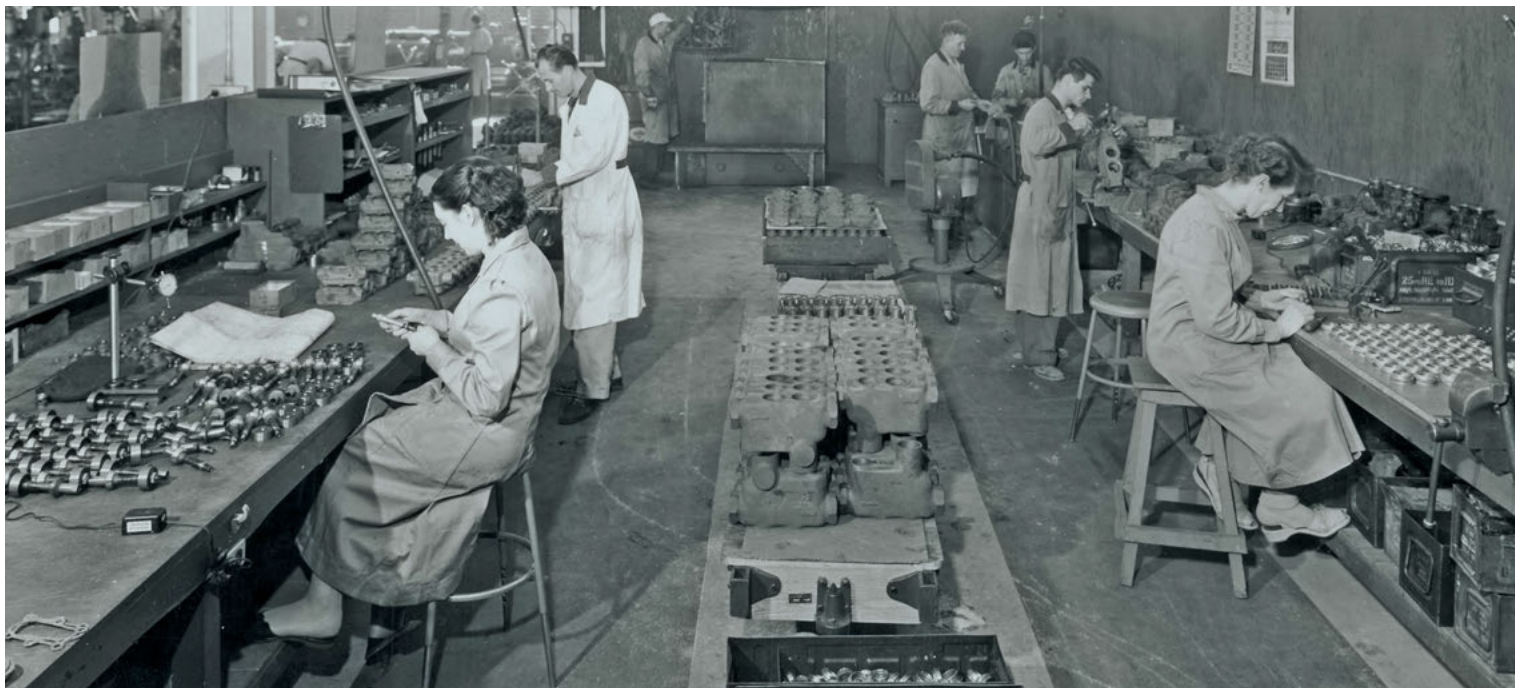
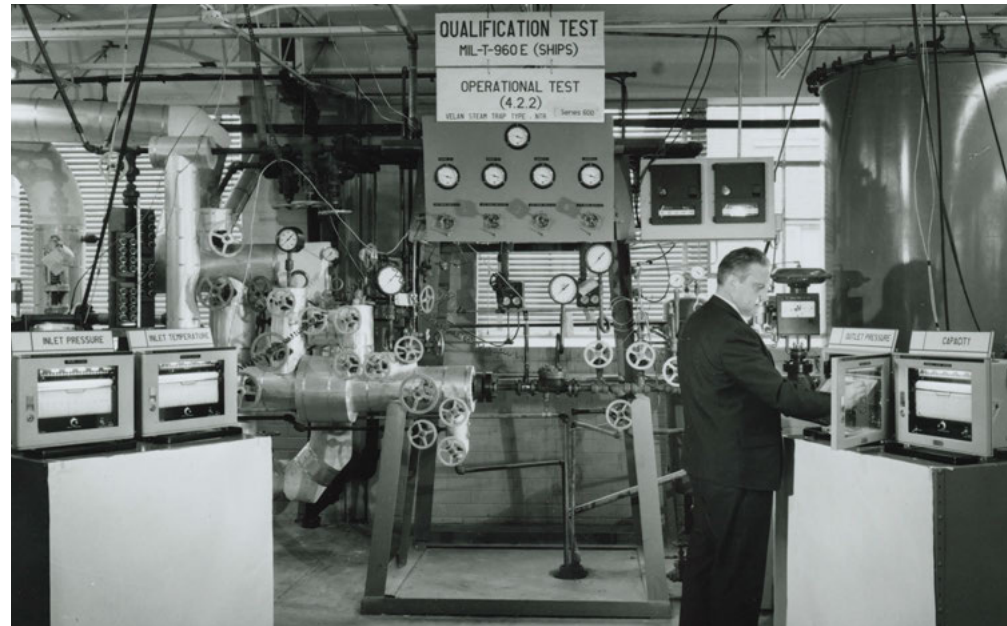
LEFT: Since the company's earliest days, women have always been an important part of the Velan team.

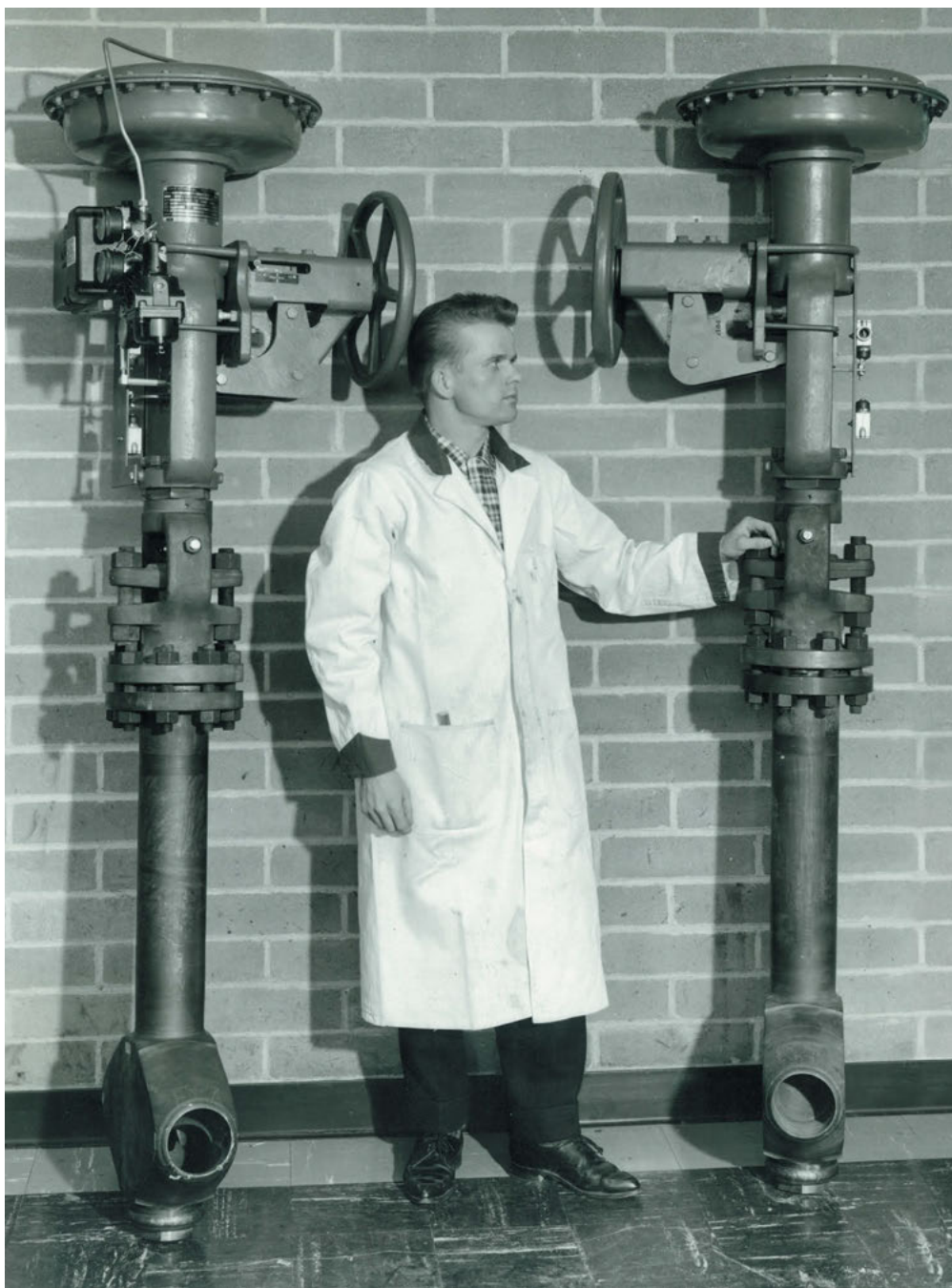


LEFT: Steam trap production on a lathe in Plant 1

RIGHT: Guy Breton, Manager of Engineering and R&D, performing operational tests to military standards on "N" type steam traps. The "N" stands for Navy.

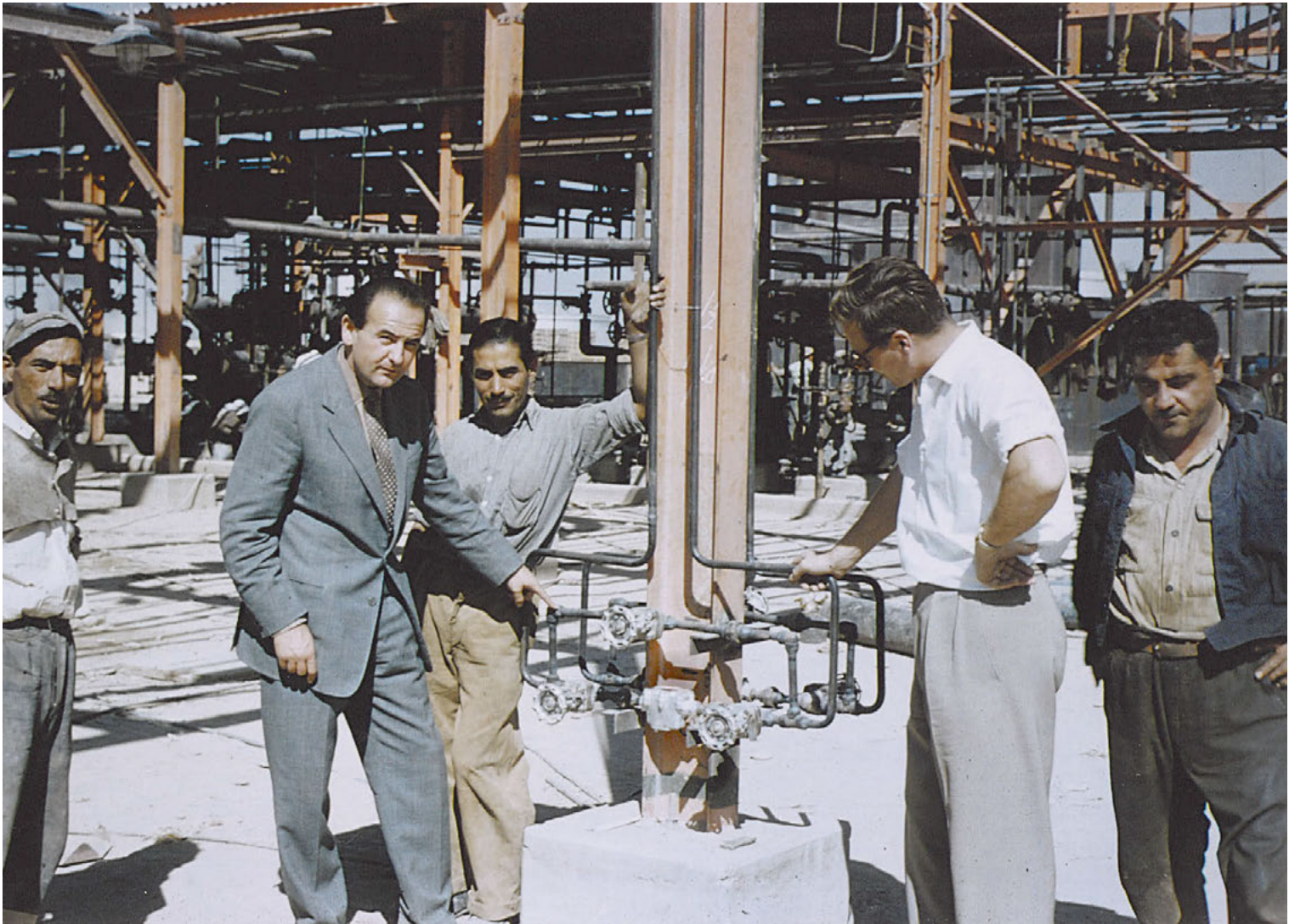
BOTTOM: A workshop in Plant 1





In 1958, Velan supplied 8,500 bellows seal valves to the Oak Ridge National Lab's research reactor in Tennessee. Here are two 4" (100 mm) stainless steel bellows seal block and control valves included in the order.

At the time A.K. Velan got the inquiry for bellows seal valves, he had to look in a Czech/English dictionary for the word "bellows." In 1959, Velan bellows seal technology was included in a license agreement to Newman Hender in the U.K.



A.K. Velan visiting an oil refinery in Iraq in 1956. He is pointing out to the refinery's engineers and maintenance people that one Velan Piping King could replace their whole installation.



1956: The Velan family visits the U.K. and British Steam Specialties (BSS). Current President and CEO Tom Velan was only four years old at the time but well dressed for the occasion with matching socks, vest, and bow tie. A.K. Velan (center) is flanked on the right by Sir John Waudby, son of BSS founder H.W. Waudby, and his wife. Also

present is Robin Sellick (far left), the future manager of Velan U.K.

Leicester-based BSS was the largest distributor of valves, pipes, and fittings in the U.K. During the Velan visit to BSS, the owner placed an order for 10,000 steam traps. After his visit to BSS, A.K. Velan continued his

sales trip and returned to Canada with a total order of 34,000 steam traps.

BSS was a minority partner in Velan Engineering Co., Velan's U.K. subsidiary. In later years, Tom Velan was on the Board of Directors with Mrs. Waudby and Robin Sellick.



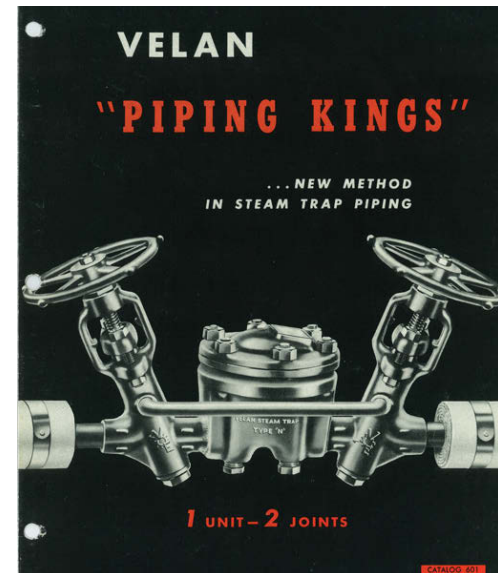
Sir John Waudby takes the cake, appropriately shaped like a Velan steam trap!



The HMCS Bonaventure, launched in Belfast in 1957, was fitted with 1,000 Velan valves. It was part of the Canadian fleet until it was decommissioned in 1970.



Steam trap machining in the U.K. plant



The first Velan Piping Kings catalog



TOP LEFT: Participants at the 1958 U.K. Velan sales conference pose in front of the Leicester plant. Peter Griggs, long-time Manager of Velan U.K. (seen in the dark suit), is joined by participants from Bang and Pingel of Denmark, Ekstroms of Finland, Davidson and Rhode of Italy, Comap of France, and Schaeffer & Budenberg of Holland.

LEFT: Testing of a Velan Piping King

A.K. Velan traveled to Japan in 1954 and again in 1956, carrying with him a sample of a Piping King and a Piping King catalog. The Piping King was an innovative invention that combined a steam trap with an integral check valve and strainer and two valves with a bypass pipe. This compact unit replaced a typical installation requiring six different units and 23 welds. The savings in weight, space, and installation cost were particularly attractive to shipbuilders.

At the time, Mitsubishi Shipbuilding in Nagasaki was the largest manufacturer of oil tankers, and A.K. convinced the company to use Velan Piping Kings on all its ships. He also negotiated a licensing agreement with Mitsubishi, but after the initial interest the company decided that manufacturing traps and valves was not a good fit for it. Following on the Piping King success at Mitsubishi, the U.S. Navy started buying Piping Kings for its ships in 1956.

Years later, in 1998, Velan signed a General Purchase Agreement (GPA) with Mitsubishi Heavy Industries (MHI) for the supply of valves for power plants. Since then, Velan has supplied a large quantity of valves to MHI power projects around the world.

ABOVE RIGHT: A.K. Velan's first visit to Japan was in 1954. Here he is shown in the Mitsubishi production plant offices in Hiroshima. During this trip, A.K. presented to the group. Unfortunately, only the President understood English so he had to translate it for the rest of his team.

RIGHT: Also during this 1954 trip, a group of the MHI engineers took him out to a Hiroshima night-club, where entertainment was provided by three traditional geisha girls.





1960s

“The times, they are a changin’”

The 1960s were an exciting time for Montreal and for Velan. It was the decade of Expo 67, Trudeauania, and also Canada’s 100th year anniversary celebration. During this time, the company continued to grow and expand its valve product line.

While A.K. was still very much in charge, the company was maturing and key people like Chuck Yovic handled sales, Ruda Maister managed production, and Guy Breton managed engineering and R&D. John Tsismelis joined Velan in 1963 working on a lathe in Plant 1. The unstinting work ethic of the Greek-born employee caught management’s attention and within two years, at age 21, he was promoted to foreman and eventually became Manager of Plant 1, where he still works after 51 years with the company.

In 1968, after graduating as an engineer from Montreal’s McGill University, Peter Velan joined the company, thereby becoming the first member of the second generation to work for the company.

LEFT: Velan distributors have always been integral members of the Velan community. Pictured here is one of the early Velan Distributor Conferences, held in the Plant 1 cafeteria, circa 1962. A.K. Velan is seated front and center in the group. The machine in the front of the room is an early overhead projector that projects from printed paper rather than transparencies.

RIGHT: An employee hardfacing with a Stellite® rod. Gas welding hardfacing was used on various valve parts, such as discs and seats.



1961

Velan GmbH opens as a sales office in Germany

1964

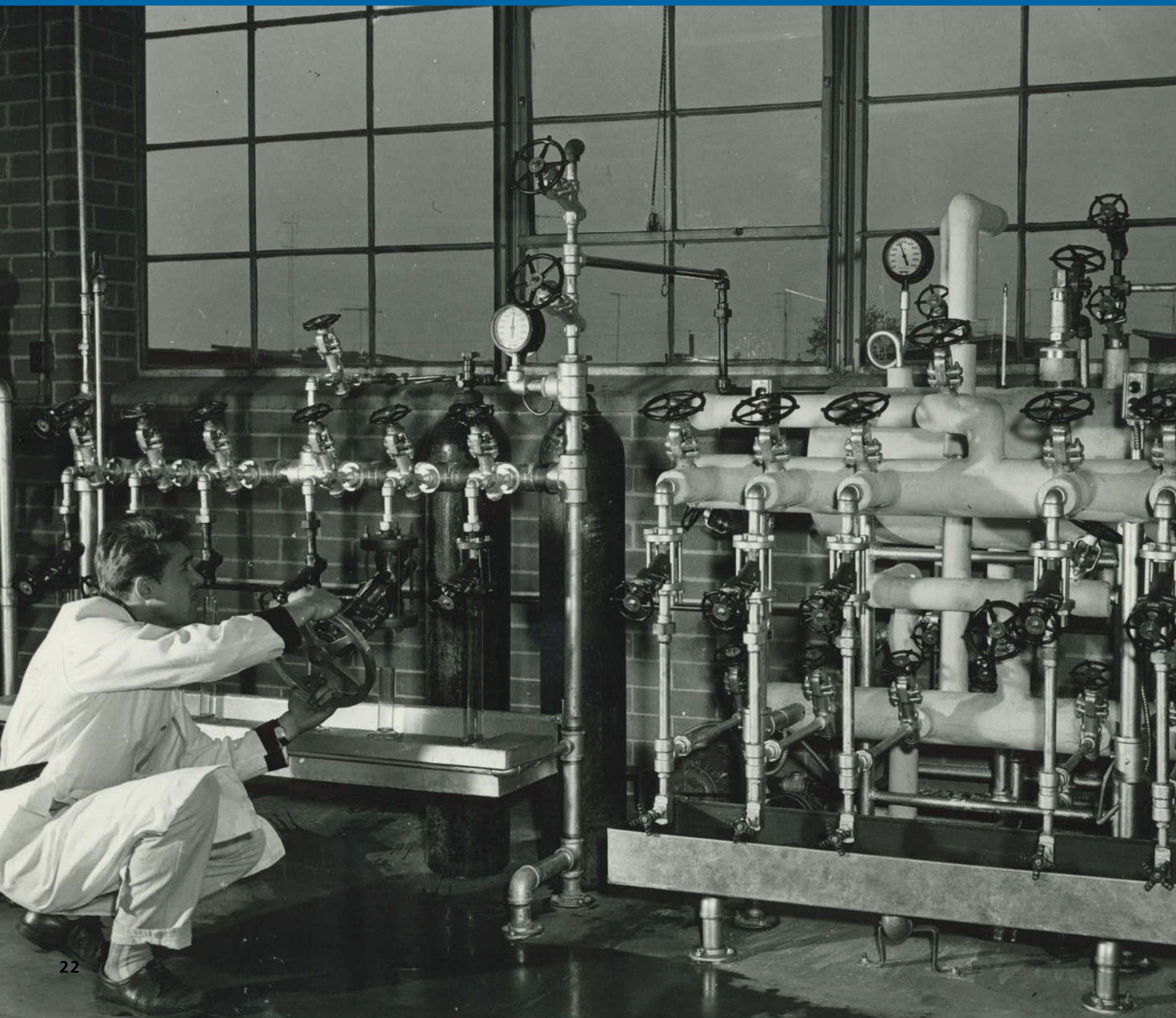
API 600 cast steel valve product line launches

1967

Velan hosts its World Wide Distributor Conference, dubbed “Velan A-Go-Go,” to coincide with Montreal’s Expo 67

1968

A second Montreal plant opens at 6025 Côte-de-Liesse





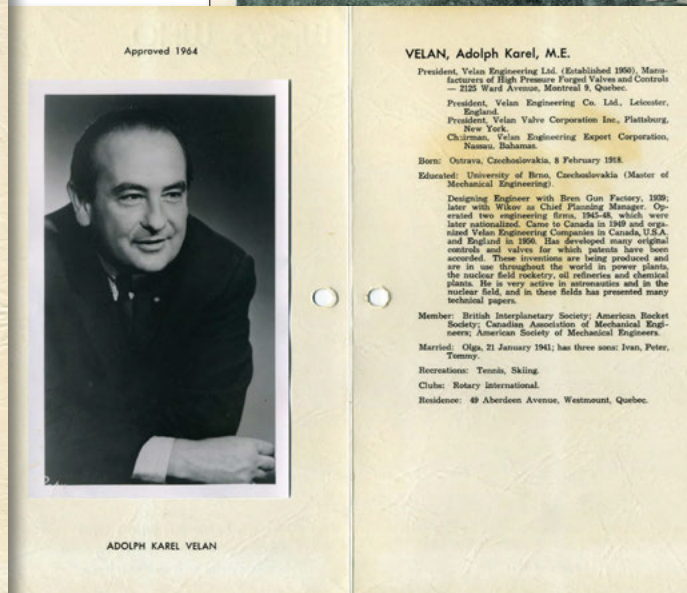
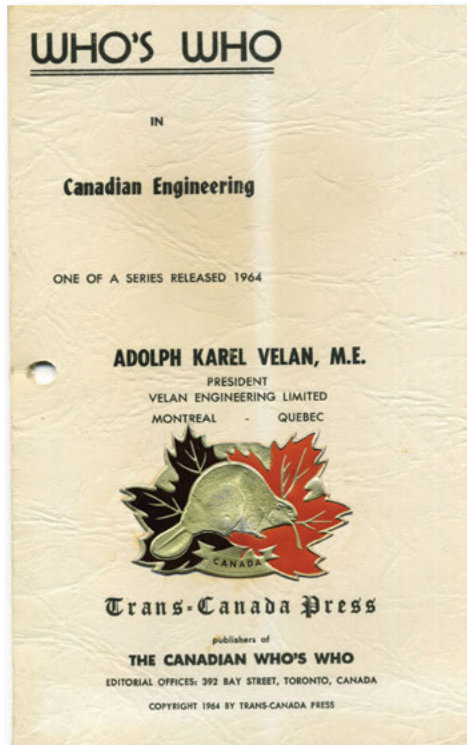
ABOVE: A.K. Velan addresses employees at the company's 10th anniversary dinner in 1960, with his wife Olga sitting beside him (pictured to his left).

LEFT: R&D has always been key to the company's success, from its earliest days to the present. The R&D labs in the sixties were the subject of great pride and were featured prominently in company photographs.

A.K. and Olga Velan were interviewed in the late 1960s at their home in Westmount. Rhu, the family dog, appears with them in the photo in the article. At the time, the company employed 500 people and A.K. stated, with typical elan, that his next goal was to "breed buffalos." A.K. never did breed buffalos, though he considered putting a herd of them on his property in the country.

He did, however, succeed in getting his three sons to work in the family business.

BELOW: When Trans-Canada Press published *Who's Who in Canadian Engineering* in 1964, A.K. Velan was featured.



One Czech's tale of success

When you look around Montreal for a successful Czech immigrant — up pops the name of A. K. Velan.

Because by anyone's standards Mr. Velan is a successful self-made man. He fled his homeland with his wife,



by Allan Leishman
20 years ago.

Olga, and two small sons in 1947 when the Communists gained the majority of seats in the government and came to Canada the following year and made a fortune.

"I had an MA in mechanical engineering and a few ideas for producing steam valves. My first customer in 1951 was the United States navy," he said sitting on the terrace of his Westmount house. They bought Velan steam traps for their destroyers.

Now his company employs 500. One of his sons is already in the business and in a few years Mr. Velan hopes all three will be working with him.

The company has plants in Plattsburgh and Leicester, England, besides Montreal. And since 1966 has been expanding rapidly because his valves are in demand for nuclear power stations. "The Americans have plans for 89 new nuclear power stations and we have the contract," he said.

The secret to his success he says is "inhuman hard work" and a good balance between his mental and physical efforts. He plays tennis and skis regularly and has been doing so all his life.

"All the Czechs in the first group (there were 65,000 who fled Czechoslovakia in 1948 and 6,000 came to Canada) did well.

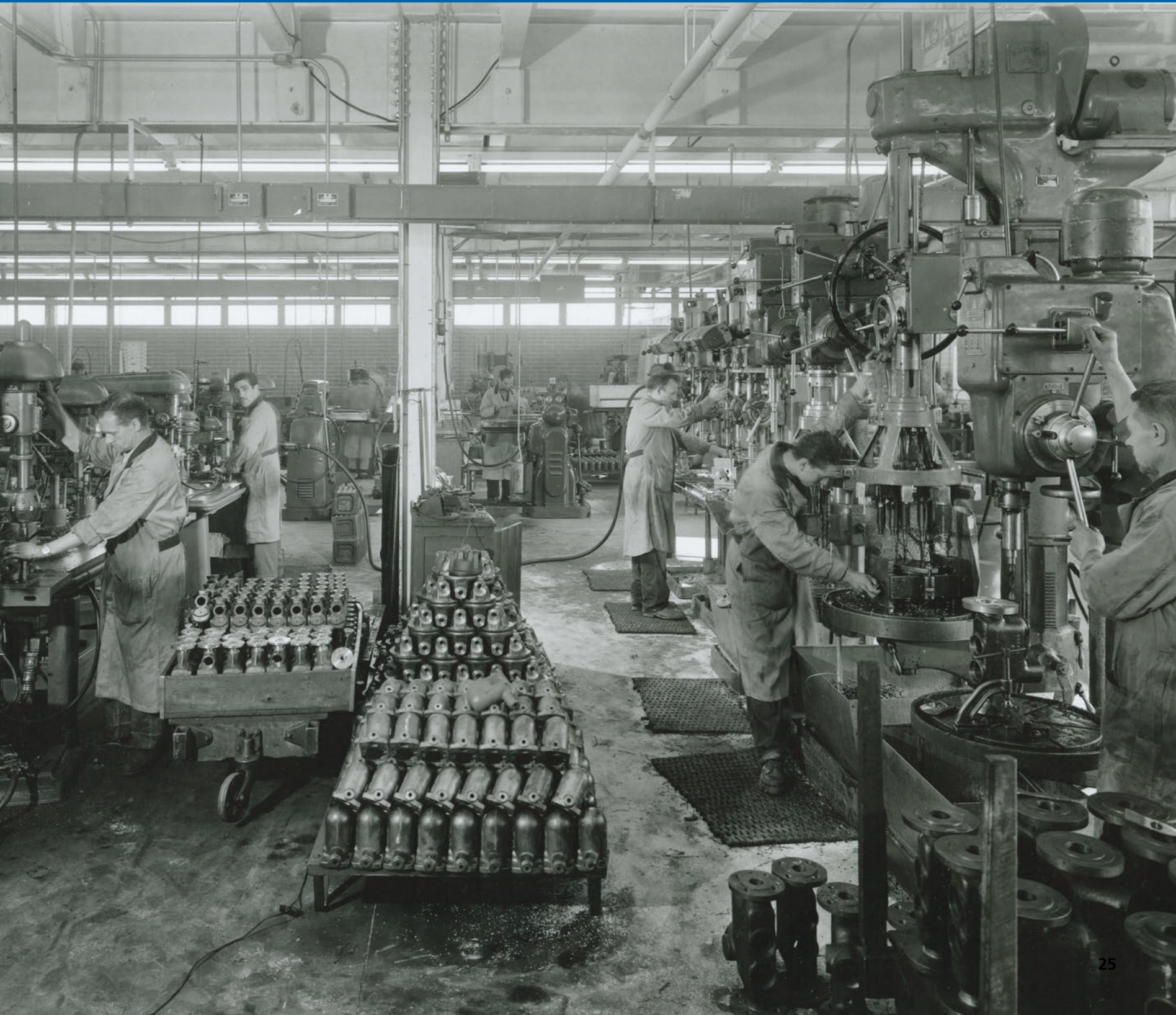
"Many helped me build up my business," he said.

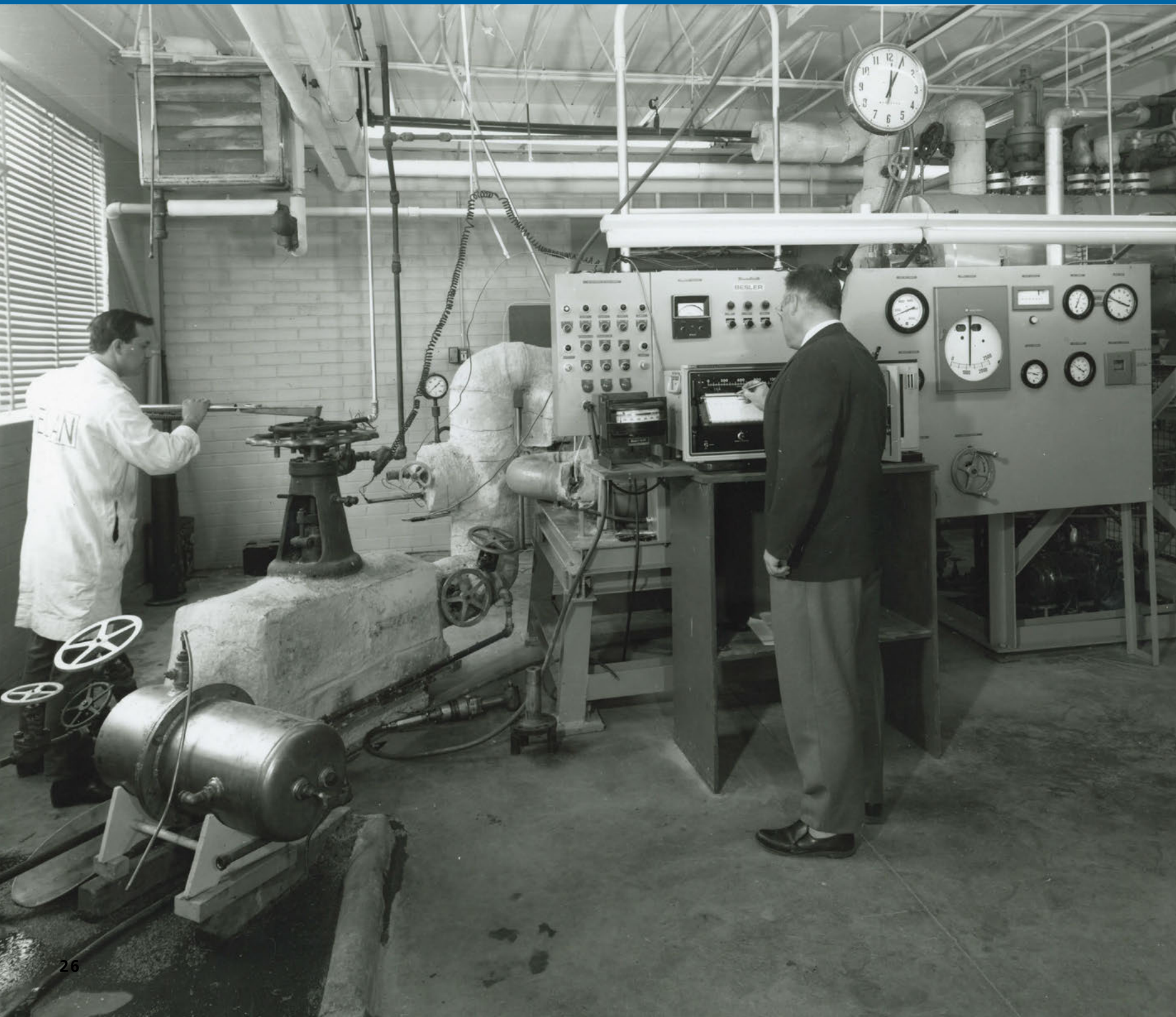
But now he is doing so well, Mr. Velan refuses to let up. He doesn't work 18 hours a day anymore but he works longer than most men.

"I think, now, I would like to breed buffalos," he said smiling.

RIGHT: Plant 1 in full production.

1960s



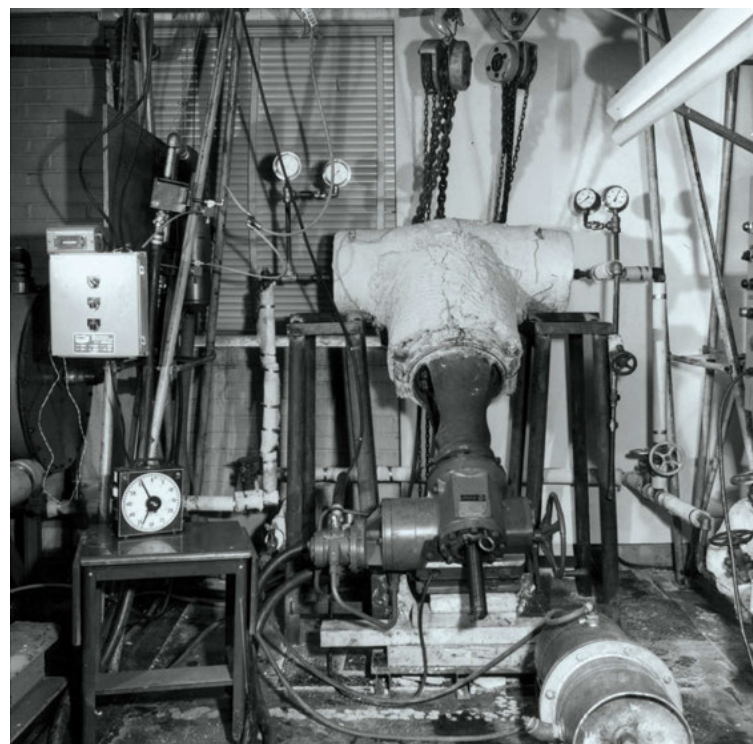


In the 1960s, we obtained valve design contracts for parallel slide pressure seal valves from the Navy Valve Yard. That was a real vote of confidence for my young company. We designed and qualification tested the 5-16" (125-400 mm) forged parallel slide gate valves for the USS Nimitz Aircraft Carrier, which was the first of nine nuclear-powered Nimitz Class Aircraft Carriers to be built. Admiral Hyman Rickover, who was in charge of developing the nuclear Navy, believed in having parallel slide gate valves. However, some of his engineers thought they wouldn't perform well in the rolling-sea conditions that an aircraft carrier faced. The qualification testing (see right) therefore ensured the valve endure 12,000 operating cycles in six different positions. The tests proved that our parallel slide valve could perform as required.

The experience we gained in meeting the engineering, quality assurance, and performance requirements of Admiral Rickover's nuclear submarine and aircraft carrier programs positioned us well to become a leader in the supply of nuclear valves to the civil nuclear power plant industry.

One time Admiral Rickover phoned me. As is often the case, I started to speak right away to update him, but he interrupted me to say: "I have been told that you are a big talker but this call is on my nickel so now I am going to talk—and you are going to listen." I listened!

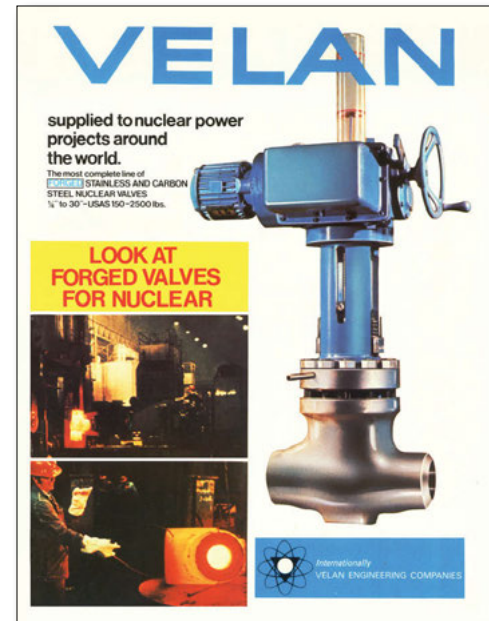
A.K. Velan



LEFT: Engineering manager Guy Breton in Plant 1's R&D lab performing a high-temperature cycle qualification test on a pressure seal valve.

RIGHT: Crew members on the nuclear aircraft carrier, USS Enterprise, spelling out Einstein's mass-energy equivalence formula $E = mc^2$ on the flight deck.

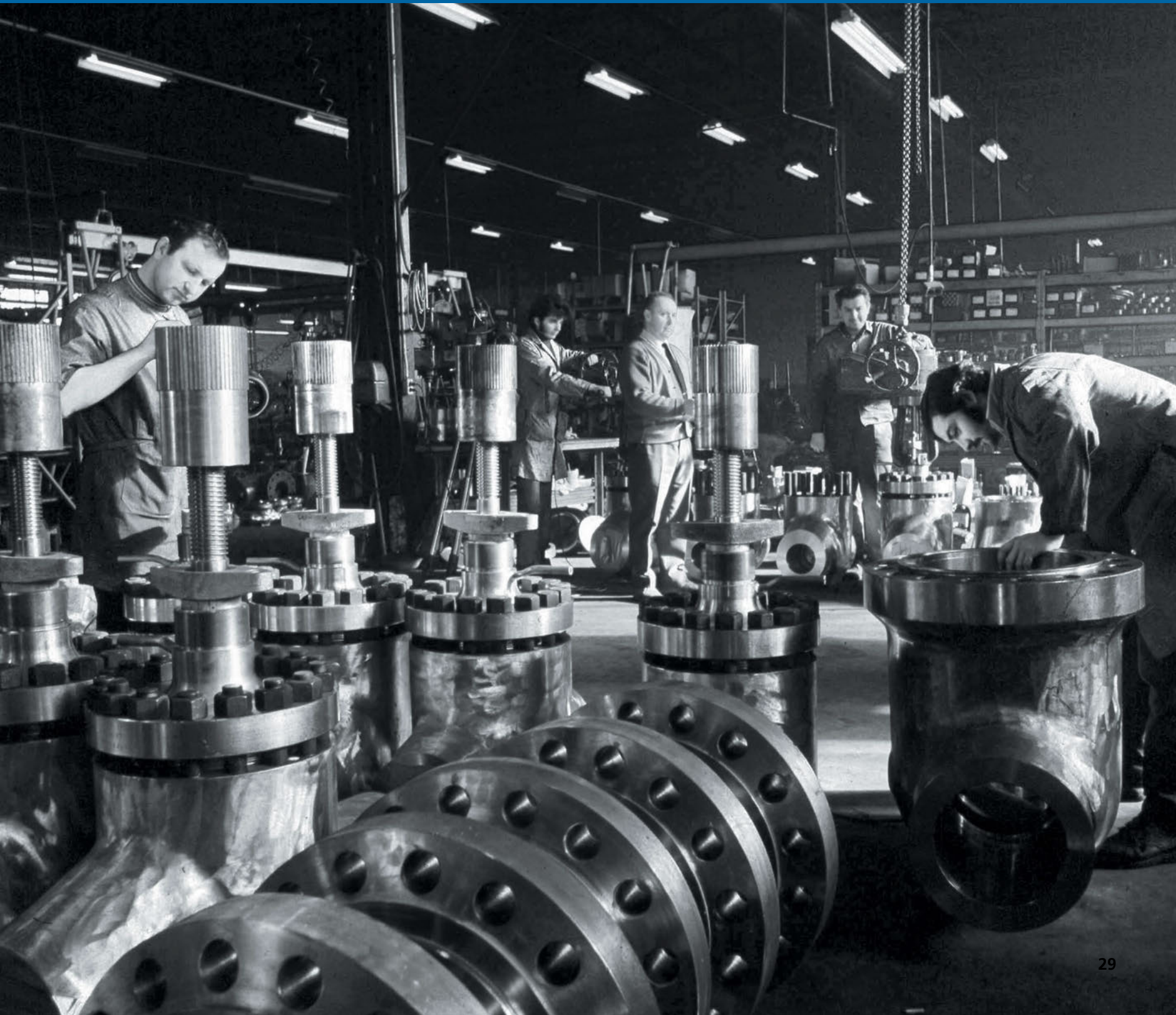


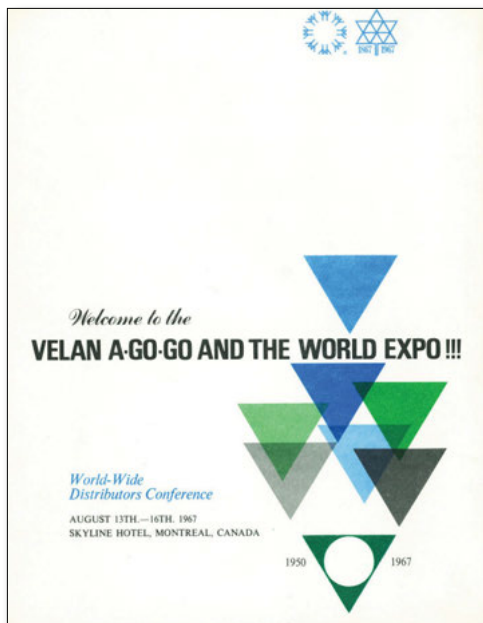


ABOVE LEFT: As demand grew beyond the capacity of Plant 1, the company rented a second plant in Montreal—the first incarnation of Plant 2.

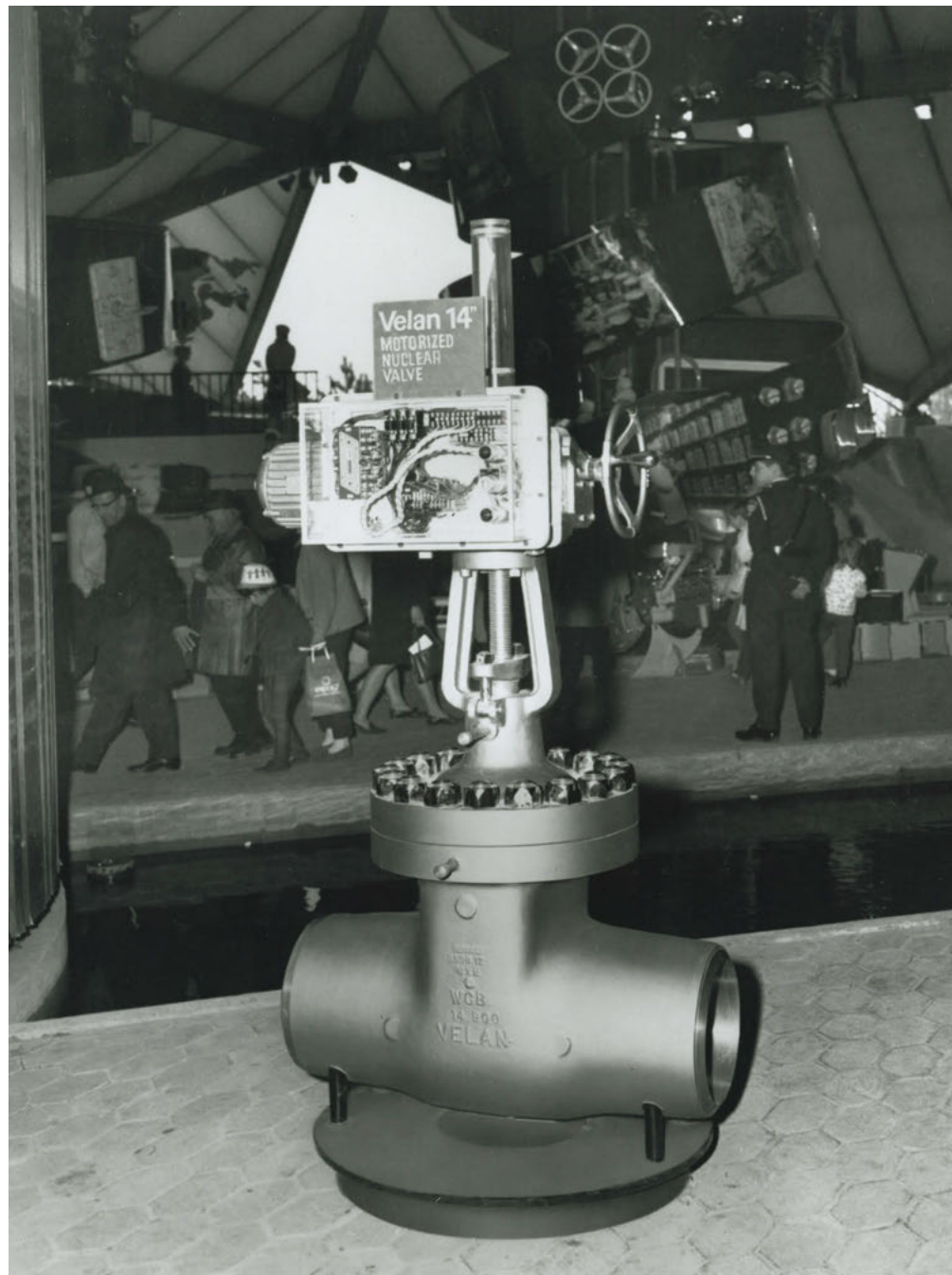
LEFT: A.K. Velan next to forged bolted bonnet valves in assembly.

1960s





Velan was asked to display a 14" (350 mm) motorized nuclear gate valve in the Canadian Pavilion's Atomic Energy Exhibit at the 1967 International and Universal Exposition (more commonly known as Expo 67). It was part of a display of nuclear power products chosen to demonstrate the country's technological advancement and industrial strength. These valves had also been chosen for Ontario Hydro's Pickering Generating Station, which was the largest nuclear power station in the world at the time. They are primary cooling system valves for boiler isolation. Each weighed 3,000 lbs (1361 kg) and stood 7' (2.13 m) tall.



"VELAN ON THE GO"
35mm SLIDE-SOUND
PRESENTATION
IN
FULL COLOR!

**A POWERFUL
SALES AID**

A colorful insight into the operations of Velan Engineering Companies. This 16-minute Slide-Sound presentation was specially produced for Velan Distributors and highlights the Company's modern, automated manufacturing facilities. It is a sophisticated lead-in to a sales presentation and will get you off to an auspicious start. It's the next best thing to being there!

- * Ideal for customer and prospective customer showings.
- * Succinctly informative (only 16 minutes)
- * Easy to set up.
- * Simple to present.
- * Fast-paced and in full color.

**CONTACT YOUR
VELAN DISTRICT MANAGER**

The Velan A Go-Go Distributors Conference in 1967 at the Skyline Hotel (now the Crowne Plaza) in Montreal. A.K. Velan is at the podium and next to him is Dave Hillen, the head of sales.





The Velan Distributor Conference in 1967 was not all work, there was a social aspect as well. Pictured here with A.K. (far right) are sons Ivan (third from left), Peter (third from right), and Tom (fourth from right). They are joined by various representatives of Velan distributors from around the world.

LEFT: To honor Montreal's hosting of Expo 67, Velan Engineering donated a sundial to be showcased on the Expo site. This sundial, installed in April 1967, was designed by A. K. Velan himself, built by Velan Engineering, and sponsored by the Rotary Club of St. Laurent-Mount-Royal.

The plastic sphere was 14' (4.27 m) in diameter and was mounted with its gnomon—the part of a sundial that casts the shadow—at an angle of 45.5 degrees, the latitude of Montreal. Also visible in the photo on the left is the Buckminster Fuller Geodesic Dome that housed the U.S. Pavilion. After Expo 67, this sundial was moved to the Rose Garden adjoining the Hélène de Champlain Restaurant.

Its whereabouts today are not known.



1970s

Growth powered by nuclear

Until the 1970s, North American manufacturing mostly supplied domestic markets. In the 1970s that began to change, and Velan was well positioned to take advantage of this. The company had already established plants in Europe and the U.S., and operations in these territories were expanded throughout the decade.

A major push toward a more globalized company came from a growing nuclear industry, which was rapidly becoming a major provider of energy in both Europe and North America. Velan's valves were widely used on both continents.

In 1970, A.K. Velan's son Ivan Velan joined the company, followed by Tom Velan in 1973. In this decade, the second generation started to have an important impact on the family business.

LEFT: Large forged bolted bonnet stainless steel nuclear valves are inspected in Plant 2 before being shipped to the U.S.S.R. This was one of the first orders where Velan introduced live-loaded packing chambers and a torque arm with ball bearings to reduce friction. The live-loaded packing chamber was developed and tested in a research program for AECL (Atomic Energy of Canada Limited).

RIGHT: An aerial view of Plant 4 in Granby, which opened in 1976.



1970

Velan becomes the first valve company to receive the ASME "N" stamp for nuclear valves

1972

First "live-loaded" packing chamber is developed

1974

A joint venture in France with Rateau focusing on the nuclear industry

1976

Fourth North American plant opens in Granby, Quebec.

1978

The U.S. manufacturing plant in Williston, Vermont, is opened



In 1972 A.K. and Tom Velan stand in front of a sign in China that translates as: "Our theoretical view and thoughts are guided by Marxism-Leninism."



Opening ceremonies outside the Canadian Exposition in Beijing.



An aerial view of the Exposition hall. Thirty-eight years later, Velan exhibited again in Beijing's largest nuclear exhibition.

In 1972, we participated in a Canadian exhibition in Beijing, China. This was just months after President Nixon's so-called "ping pong diplomacy" signaled an opening up of China towards the west. The Chinese removed many of the anti-west signs around Beijing, but the Friendship House where we stayed still had a sign in the room where I played ping pong with local staff that read: "Death to the Imperialist Dogs."

I was 20 years old and had just graduated from McGill University when my father invited me to go with him to China. This was Maoist China: Everyone wore the same clothing and waved their little red books that contained the sayings of Chairman Mao. This was a China recovering from the excesses of the Cultural Revolution, which included such failed ideas as making cars go on red and stop on green.

At the exhibition, there were continuous waves of Chinese visitors looking at the Canadian products. Our stand was visited by the famous Chinese Premier Zhou Enlai (pictured right with A.K.), and I shook hands with him. We had the opportunity to visit several factories in the Beijing area. Looking back on the visit to China, it would have been impossible to imagine at the time that within one generation this strict, communist society would turn into a highly entrepreneurial society that is a manufacturing powerhouse.

Tom Velan



A.K. Velan received visitors at the crowded Velan booth.



A.K. Velan (right) walking in 1972 with Zhou Enlai, China's first Premier of the People's Republic of China, who served from October 1949 until his death in January 1976.



In Moscow in front of a monument with a huge image of Lenin, A.K. Velan carries one of his famous Velan catalogs after meeting with potential customers. In honor of the moment, he makes a victory (or peace?) sign.



LEFT: A.K. and Tom Velan relax in front of the Kotelnicheskaya Embankment Building, one of seven Stalinist skyscrapers completed in 1952.

After the China exhibition, A.K. and I flew to Moscow via Irkutsk. We visited potential customers in Russia and they were surprised that A.K. could speak Russian (one of his six languages).

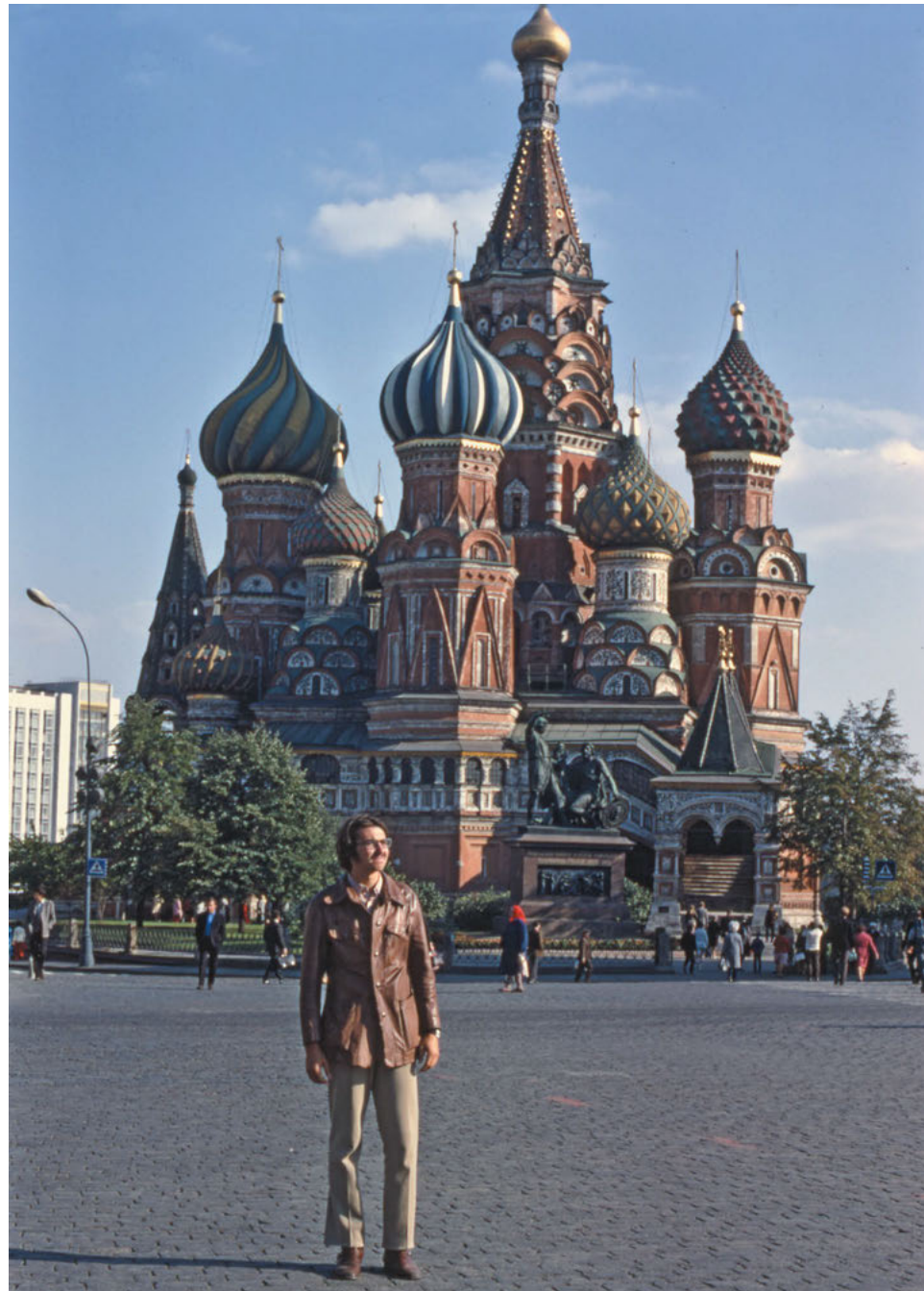
A.K. was positively surprised by the reaction from the sales calls. They said “We know about Velan: Where have you been all these years?” They told us that despite the brutal war between Russia and Germany, German companies were the first to come selling to the U.S.S.R. after the war.

Following the visit, we received enquiries, and in 1973 Ivan went to Moscow to negotiate a multi-million dollar order. In this case, just showing up led to success!

At the time, I wasn’t planning to join the company, but my father said he needed someone to administer the large order. I was interested in working on this Russian order but I still don’t know if my father was really looking for someone to handle the order or trying to get me to join the company. Probably a bit of both.

Tom Velan

RIGHT: Tom Velan in Red Square in front of Saint Basil’s Cathedral, Moscow.





Velan-Rateau was a 50/50 joint venture between Velan and Rateau in France. The production plant was built in 1974 in La Courneuve, a suburb of Paris where Rateau's production was located.



Several years later, Velan-Rateau moved its plant to the sea-side community of La Baule. The company was later named Alsthom-Velan after Alsthom bought Rateau. The name of the company was subsequently changed to Alsthom-Velan, GEC Alsthom-Velan, and finally Velan S.A.S. after Velan bought out Alstom's 50% of the business.



Velan-Rateau President Henri Morin (seated) reviews plans and consults with Velan-Rateau Production Manager Patrick Henry (standing).

Patrick Henry later became General Manager of the company.



Tom and his young family attend the NUCLEX exhibition in Switzerland in 1978. Daniel Velan, the first of their three children, sits on top of a large forging while Tom's wife Dana makes sure he doesn't fall.

RIGHT: A multilingual Velan catalog aimed at the international petrochemical and power industries.

Pressure Seal Valves, Globe, Gate, Check

Wannen, rubricata a tornapage et clapets de vau retour a joint etolclaire

Valvole a globo e saracinesca e di ritorno per tenuta di pressione

Valvulas con bronce, sellado a presion, de globo, compuerta y retorno

Schieber, Regel- und Ruckschlagventile mit Schieberhaute

バルブ、ゲート、チェック

VELAN

SIZE RANGE: 1/2" to 18", PRESSURE CLASS: 150 to 2500 PS.

MATERIAL: Forged carbon, alloy and stainless steel.

END CONNECTIONS: Butt-weld and flange.

SEALING: Graphite, rubber, or PTFE.

LITERATURE: Catalog # 100-1000 SS.

Dimensiones: 1/2" a 18", CLASE DE PRESION: 150 a 2500 PS.

MATERIALES: Acero forjado, alea y acero inoxidable.

TIPES DE RACCORDS: Solda y rosca.

SERVICIO: Fluidos corrosivos, gases, altas temperaturas.

MANEJO DE CATALOGOS: 100-1000 SS.

Dimensiones: 1/2" a 18", CLASE DE PRESION: 150 a 2500 PS.

MATERIALES: Acero inoxidable y alea especial.

ATACOS: Rosca y solda, flange, y rosca a 180°.

SERVICIO: Fluidos corrosivos, gases, altas temperaturas.

MANEJO DE CATALOGOS: 100-1000 SS.

Dimensiones: 1/2" a 18", CLASE DE PRESION: 150 a 2500 PS.

MATERIALES: Acero inoxidable y alea especial.

CONEXIONES: Rosca y solda, flange, y rosca a 180°.

SERVICIO: Fluidos corrosivos, gases, altas temperaturas.

MANEJO DE CATALOGOS: 100-1000 SS.

Dimensiones: 1/2" a 18", CLASE DE PRESION: 150 a 2500 PS.

MATERIALES: Acero inoxidable y alea especial.

CONEXIONES: Rosca y solda, flange, y rosca a 180°.

SERVICIO: Fluidos corrosivos, gases, altas temperaturas.

MANEJO DE CATALOGOS: 100-1000 SS.

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MATERIALES: Acero inoxidable y alea especial.

CONEXIONES: Rosca y solda, flange, y rosca a 180°.

SERVICIO: Fluidos corrosivos, gases, altas temperaturas.

MANEJO DE CATALOGOS: 100-1000 SS.

Widest Range of Quality Valves and Steam Traps

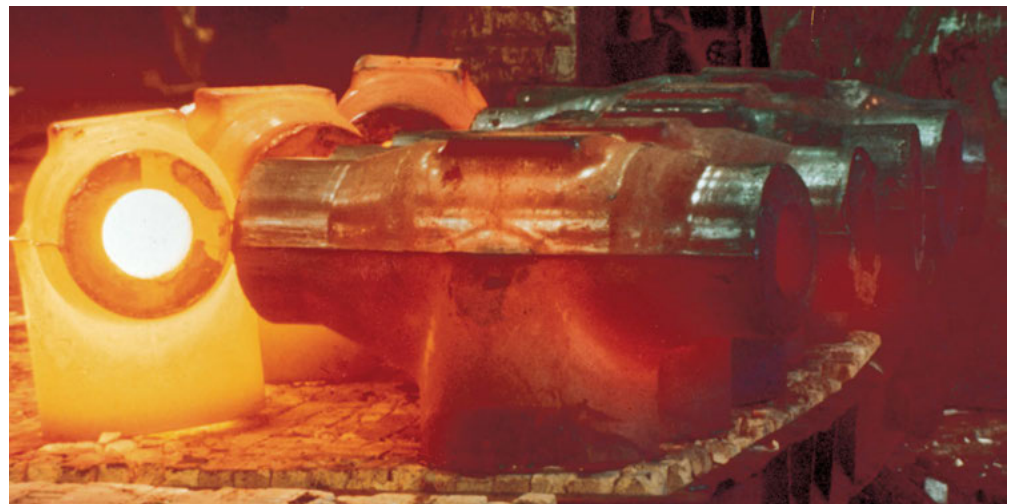
La plus grande variété de robinetterie et de purgeurs de vapeur de haute qualité

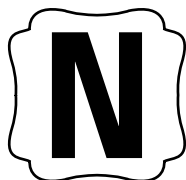
Una gamma vastissima di valvole e scaricatori di condensa di qualità

El más amplio surtido de válvulas y purgadores de vapor de alta calidad

Grosse Auswahl an Ventilen und Kondensat ableiter Qualitat

バルブ、ゲート、チェック





In 1970, Velan was the first valve manufacturer worldwide to get the nuclear ASME "N" stamp designation for its products. Velan still holds the "N" stamp designation after more than 40 years.

RIGHT: Quality control and assurance have always been a priority for Velan and in the early 1970s Velan's efforts were recognized. As noted in this catalog from 1975, The American Society of Mechanical Engineers (ASME) awarded Velan numerous certificates acknowledging the company's commitment to quality control.

LEFT: Velan valve body forgings are manufactured by Cameron Iron Works (now Wyman Gordon). Velan made large investments in closed dies to forge one-piece bodies up to 24" (600 mm) seat diameter.

1950 25 1975

QUALITY CONTROL AND ASSURANCE

Stringent Quality Control and Assurance is the keystone of our Nuclear Division at every stage of production. This goal is achieved in two levels.

QUALITY ASSURANCE DEPARTMENT

The first level is attained through a comprehensive Quality Assurance Program contained in the Q.A. Manual which complies with AEC Guide Lines and the ASME Section III Code, complemented by a set of detailed manufacturing procedures, including nondestructive and hydrostatic testing, cleaning and packaging. Additional special requirements are contained in QCI's Quality Control Instructions issued for each project. The Q.A. Department also operates calibration and gauge control systems, where accuracy is based upon specification set by WBS, trains and qualifies our own skilled NDT inspectors and welders.

QUALITY AUDITOR

The second level is provided by independent evaluations, audits and corrective actions performed by the Company's Quality Auditors, directly responsible to the President. This includes external audits of all major suppliers.

The **Quality Control Department** is responsible for the finished product complying and meeting all the predetermined quality requirements established by the Quality Assurance Group.

Metallurgical and Chemical laboratories are used to check the chemical and physical properties of raw material and completed components. Tests include: cold and hot tensile properties, weld ability bend tests, impact, hardness macrostructure, ferrite contents of welds, intergranular corrosion tests and others.

Dimensional accuracy as well is carefully confirmed.

Completed valves are functionally and hydrostatically tested to approved and detailed procedures. Prototypes are life-cycled under operating conditions and its functional operation proven during and after specified seismic loading.

The final "Valve Pedigree" Documentation, prepared by experienced inspectors, provides a permanent record for complete achievement of established quality goals.

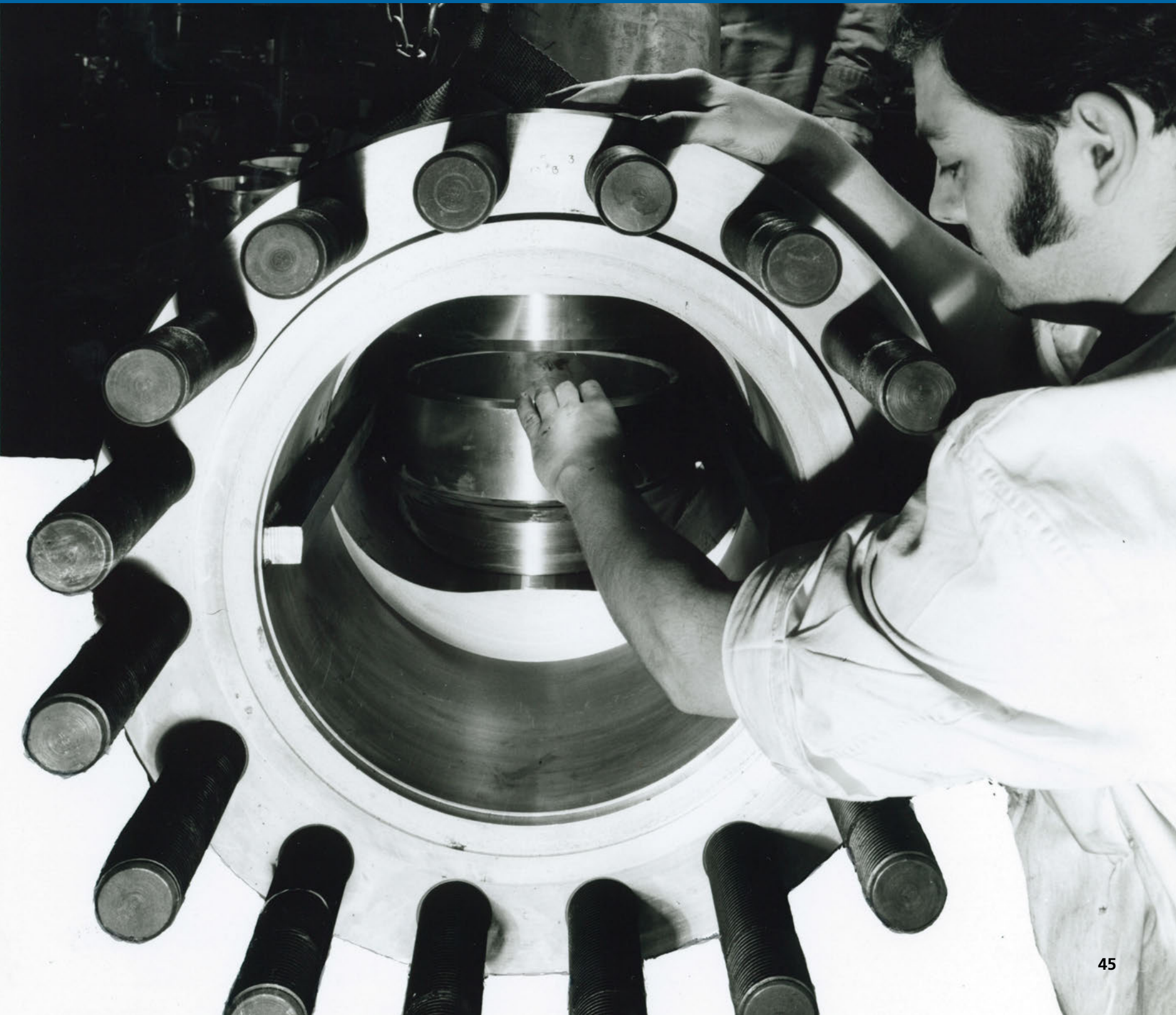




An advertising campaign by the Canadian Department of Manpower and Immigration featured a testimonial by A.K. Velan and other immigrants who were “building a better Canada.” These ads were displayed on buses and metros throughout Montreal and Canada.

A.K. and his sons Ivan (behind the desk) and Peter (in front of the desk) discuss corporate strategy at the company’s Head Office in Plant 1. Peter joined the company in 1968 and worked in production and engineering, later becoming Executive VP of Production and Engineering. Ivan joined the company in 1970, working in sales and later becoming Executive VP.

RIGHT: A Velan employee ensures the wedge in a forged bolted bonnet stainless steel nuclear valve is fitted properly.





Plant 3 in Williston, Vermont, opened in 1978, at which time production moved from Plattsburgh, New York, to the new Vermont plant.

LEFT: Testing of a 24" (600 mm) pressure seal valve in the Williston, Vermont, plant.



Opening ceremony of Plant 3 in Williston, Vermont, in 1978. In attendance were (from left to right): Richard Snelling, Governor of Vermont; A.K. Velan; Gordon Paquette, Mayor of Burlington (partially hidden); and Paul Strelczyk, Plant 3 Manager.

Ivan Velan at the podium with (left to right): Peter Velan and Bob Putnam, Manager of Velan's Plattsburgh Plant. Third from the left is Ed Loranger, Plant 3's Government Quality Inspector. Others in the photograph include: Pam McKeever, Velan Head Office Sales Administrator for the U.S. Navy account; Velan Sales Manager Rein Maasik; Velan Chief Stress Engineer Stan Isbitsky; and Andy Smith, current VP of Procurement.





1980s

New ideas, new challenges

Innovation and technological breakthroughs in the valve industry accelerated in the 1980s. Multi-turn valves were giving way to quarter-turn valves. There was also an increasing emphasis on automation, which meant valves could be opened and closed remotely.

Meanwhile, the 1980s saw increasing competition from Japan, to the point where the Valve Manufacturers Association (VMA) took out an anti-dumping action against certain companies from that country. Meeting the challenge head on, Velan opened its first Asian plant in Korea in 1988. In the following decade, costs rose in Japan and Korea became a lower cost production location. The 2000s saw the emergence of China and India in valve production. The company's expansion continued in Montreal and abroad.

LEFT: Velan employees in the Engineering Department of the first Plant 2 on Côte-de-Liesse and Mignerons Street. Several of the people in the picture are still with us today. From left to right: Dane Much, Director, Inventory; Jean-Paul Béala, recently retired; Serge Groulx, Assistant General Manager/Planning Manager, Plant 1; Guy Gaillardet, Design Manager; and Chris Ulley, Group Leader/Design Manager.

RIGHT: An employee at a Goupil computer inside Velan-Rateau in France. The French-manufactured computer was introduced in 1981 and was one of the first computers to be connected to a network because it had a built-in modem. To put things into perspective, the Velan Canadian operation at the time possessed only one computer terminal that was connected to the McGill University Engineering Department's mainframe computer.



1980

Velan expands its distribution network in the U.S. with Vinson appointment

1981

Velan introduces a new logo

Velan's name officially changes from Velan Engineering to Velan Inc.

1982

Velan receives the patent for y-pattern bonnetless globe valve

1984

Velan relocates Plant 2 to its current location

The company launches Memoryseal® ball valves with patented seats

1986

Velan establishes metal-seated ball valve product line in partnership with Peter Kindersley

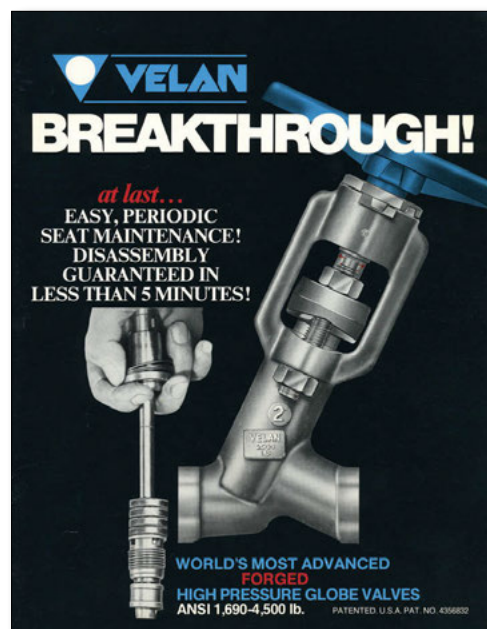
1988

Velan opens its first Korean manufacturing plant

1989

Velan Portugal opens

Velan acquires Sereg in Lyon and GEC Alsthom, forming the 50/50 company GEC Alsthom Velan



As part of the company's global sales initiative, Velan attends a tradeshow in Bahrain. Gordon Hogben, standing next to Tom Velan, was stationed in Dubai developing sales in the Middle East. He later worked out of London, U.K. Leon Noory, the Export Sales Manager, was of Egyptian origin. When Tom joined the company in 1973, Leon Noory was a one-man department, doing all export quotes and order administration.



In 1982, Velan obtained a patent for a new y-pattern bonnetless globe valve featuring innovative quick disassembly for maintenance. The idea came to A.K. Velan while he was driving to his family's country place. The valve includes a solid Stellite® disc, brazed seat, non-rotating stem with spline, and ball bearings for easy operation.

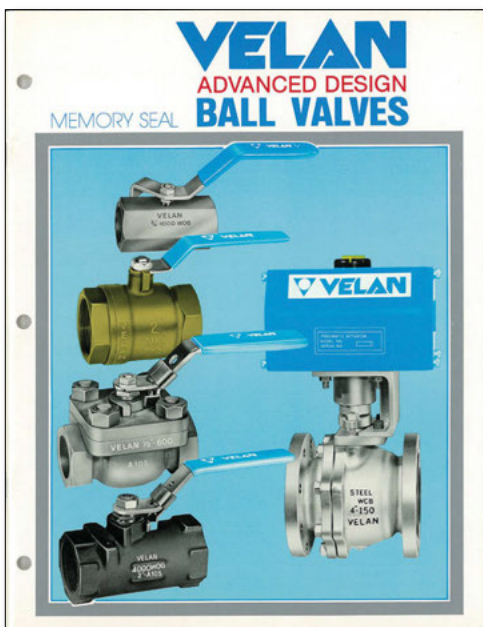


In 1984, Velan relocated Plant 2 to its new home on McArthur Street. At bottom right, Tom, Peter, and A.K. Velan are joined by then Mayor of Ville Saint-Laurent, Marcel Laurin, at the ribbon cutting to mark the opening of Plant 2's new permanent home, shown above.



TOP RIGHT: Two Velan employees weld wedge guides for stainless steel valves in Plant 2.





VELAN

ADVANCED DESIGN BALL VALVES

MEMORY SEAL

VELAN MEMORY SEAL BALL VALVE TECHNOLOGY

RESILIENT SEATS DETERMINE QUALITY OF OPERATION

The functional characteristics of resilient seats in ball valves have a profound impact on:

- VALVE LIFE • VALVE TIGHTNESS • OPERATING TORQUE

INHERENT DIFFICULTIES WITH STANDARD SEATS

1. Cold flow, caused by high compressive forces
2. Fatigue and consequent loss of sealing ability
3. High Friction and Operating Torques due to high seat compression.

VELAN SEALING CONCEPT

1. No cold flow as sealing is achieved with very small compression.
2. Little fatigue as the sealing portion of seats is under tension.
3. Low operating torque of up to 50% less, due to small effective contact face.
4. Long Service Life: Many valves remain tight after more than 1 million cycles.

UNIQUE SEAT GEOMETRY

CONCAVE — CONVEX, FLEXIBLE "IN-TENSION" SEATS WITH INDUCED SEALING MEMORY FOR LOW AND MEDIUM PRESSURES

AUTOMATIC SEAT-BODY SEALING

The seat cross-section has a concave outer and convex inner surface like a circular arch. When the seat is partially flattened by the ball during assembly, compressive stress in portion ABC, ensures positive seating against the body AB. The seat also increases in circumference, somewhat like a rubber band, creating tension in the mid-portion ACDA, ensuring reliable seating with the ball.

A SEALING MEMORY is induced during the ball assembly exerting continuous seating pressure and automatically compensating for wear.

- Automatic compensation for wear and pressure-temperature fluctuations
- Effective seat body seating
- Continuous seating pressure of seat against ball
- Small seal ball contact face
- Up to 50% less torque, smaller actuators

FULLY ENCLOSED COMBINATION SEAT WITH INDUCED SEALING MEMORY FOR HIGH PRESSURES

The seat cross-section has a **static part**, left of line KE in compression, ensuring positive seating against the body and a **resilient springlike part**, in tension, to the right of line KE, ensuring reliable seating with the ball.

MULTIPLE SEAT-BODY SEALING

1. Edge E penetrates the shoulder H at assembly
2. Additional seating on surface EJ and
3. Corners K and L, when narrow head KL deforms during assembly.

AUTOMATIC SEAT-BALL SEALING

When seat is partially deflected during ball assembly, the "in-tension" portion EXLNCH is in continuous contact with the ball.

A SEALING MEMORY is induced exerting continuous seating pressure and automatically compensating for wear. The raised part C is calculated for 1 million cycles; flat when first installed, it becomes concave when seat is deflected and hugs the ball at A and B.

ADVANTAGES

- Perfect double seal. Up and downstream tightness
- Long life due to less wear — 1 million cycles or more
- Automatic compensation for wear and pressure-temperature fluctuations

STEM DESIGN CONCEPT

1. **EXPLOSION PROOF.** Blowout proof safety is provided by internally inserted backseated stem.
2. **FULLY GUIDED.** — Wobbling due to side thrust is minimized by affinity metal-contained solid teflon packing rings. Compression of rings is adjustable to compensate for wear. b) Stem bushings.
3. **STEM THRUST WASHER.** a) prevents galling, b) reduces torque, c) provides secondary stem seal.

FIRE-TIGHT DESIGNS

Should the resilient seats burn out during a fire, secondary metal-to-metal seals guard against leakage and feeding the fire. Fire-safe operation is required for such services as furnace fuel lines, LPGs, product lines, petroleum and petrochemical piping systems.

THREE SECONDARY SEALS

1. **BALL SEAL.** The slotted stem-to-ball connection allows the line pressure to move the ball right in closed position downstream and seat against a machined edge of the body or body end ring.
2. **BODY SEAL.** A spiral wound metal-asbestos or metal-graphite gasket in split body and top entry designs assures seating under fire conditions. Bar stock, one-piece forged, or end-entry types have a secondary metal-to-metal seal for double seating at all times and emergency sealing under fire conditions.
3. **STEM SEAL.** The stem shoulder provides a metal-to-metal seal with the machined surface of the body. Additional safety can be provided with a high temperature stem packing, which will survive the fire. (Asbestos or graphite)

In 1984, Velan introduced the company's patented Memoryseal® ball valve. The features and benefits of the product were explained in a new full-color product brochure. The bright red valve to the far right is undergoing fire testing. Also shown is a cutaway of the top-entry ball valve and a typical in-service shot.

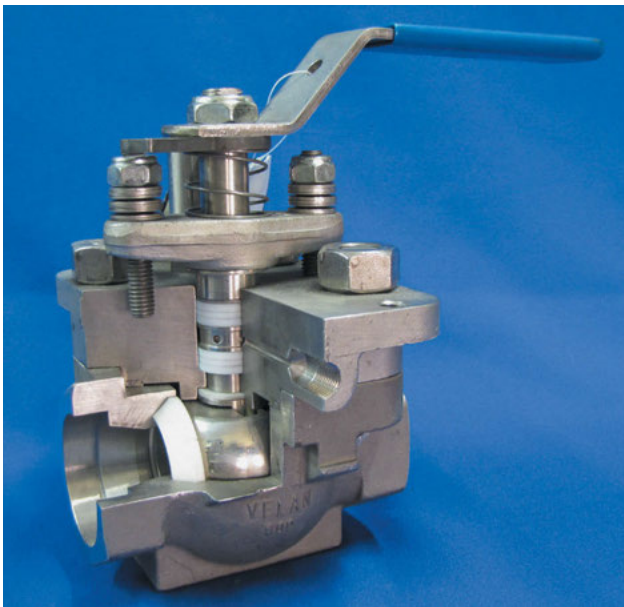
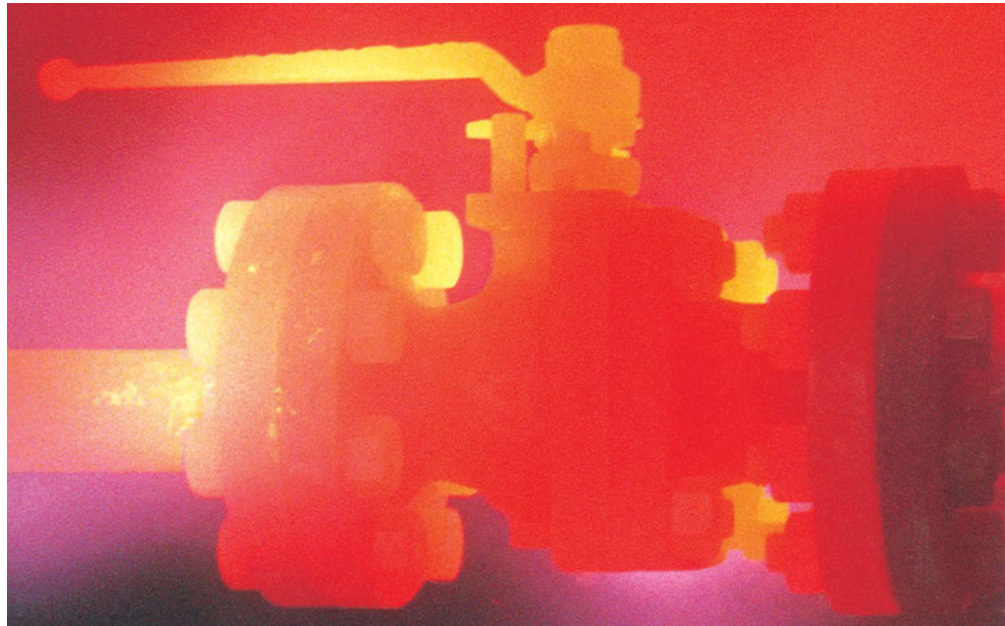
Original Velan Engineering logo.

The next logo was the triangle representing "V" for Velan covering the globe.

This new logo was introduced in 1981 at the same time as Velan changed its name from Velan Engineering to Velan Inc.

52

1980s NEW IDEAS, NEW CHALLENGES

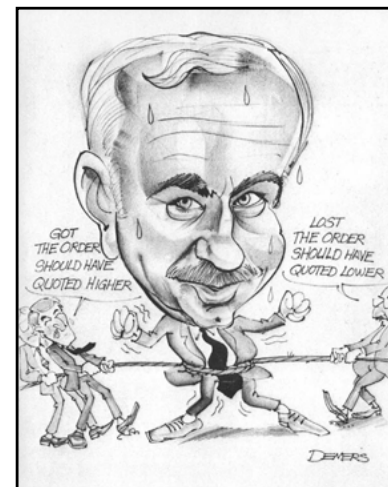




In 1984, Velan hosted its international Sales Conference. In the picture, Ivan Velan is addressing the conference while the head table looks on (right to left: A.K. Velan, Peter Velan, Tom Velan, Mike Zivic, Ewart Francois, Rein Maasik, and Ralph Sargent).

For the conference, a caricaturist was commissioned to make caricatures of the executive team based on inputs from Ivan and Tom Velan. The one shown on the screen is of A.K. who often referred to himself as the chief fireman putting out fires wherever they occurred. The caricature also depicts lighted matches dropping out of A.K.'s back pocket.

RIGHT: Another caricature depicted Renald Roussel, the energetic Plant 2 Manager, multi-tasking at his desk and Ralph Sargent, our VP of International Marketing, being squeezed by competing interests.





Velan employee Jack Kuhner performs cryogenic testing with liquid nitrogen on a Class 1500 steel gate valve. Jack went on to become one of Velan's first field sales technicians, traveling the world to work with customers.



Machinery and equipment were specially engineered to meet the requirements of advanced large forged valve manufacturing. This included computer numerical control (CNC) horizontal and vertical boring mills with tool changers, numerical control (NC) lathes, and NC machining centers for valve and body parts. At the time, over 50 CNC machines were in operation in Velan's North American plants.



Velan's plant in Ansan City, South Korea, was built in 1988, and concentrated on manufacturing components and subassemblies for 2–3" (50–80 mm) cast valves.



Opening ceremonies for Velan's plant in Ansan City, South Korea. Standing next to A.K. Velan is Doug Chang, President of Velan, Korea, a position he continues to hold today.

LEFT: A Velan technician performs tests on cast steel gate valves in the Granby plant.





In 1989, Velan formed a 50/50 joint venture with Cometna, a Portuguese foundry, and production began in April of that year in a 60,000 sq. ft. (5575 sq. m.) manufacturing plant in a suburb of Lisbon.

The plant had modern equipment, including five NC machines used to increase Velan's capacity to fulfill orders of all sizes and quantities for top-of-the-line API 600 cast steel valves. Velan later bought out Cometna's 50%.

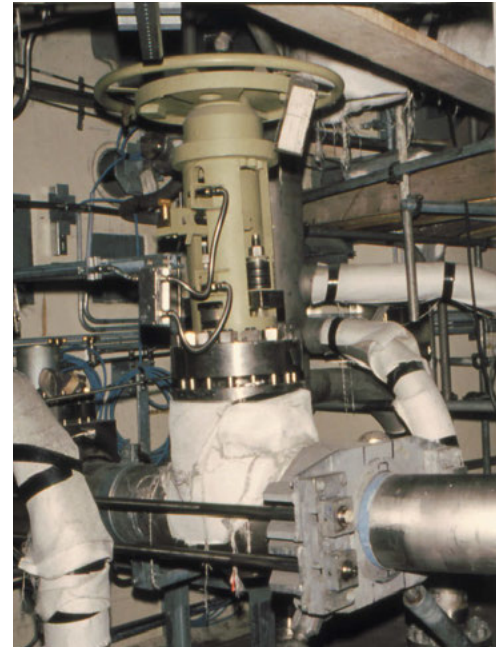
LEFT: José Cabrita Rodrigues, General Manager of Velan Válvulas Industriais, Lda., joined Velan Portugal in 1991 and continues to manage the company.

BOTTOM LEFT: Velan Portugal

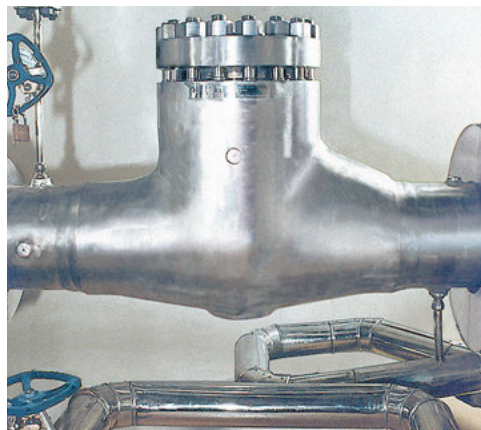
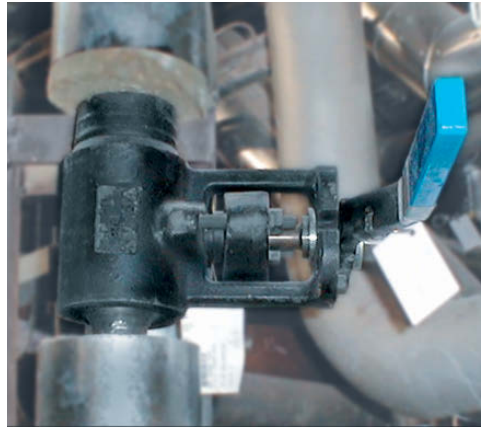


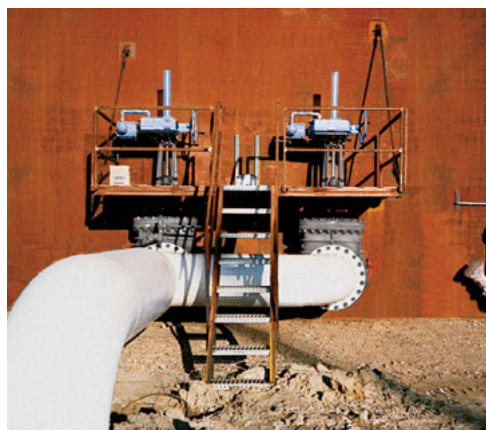
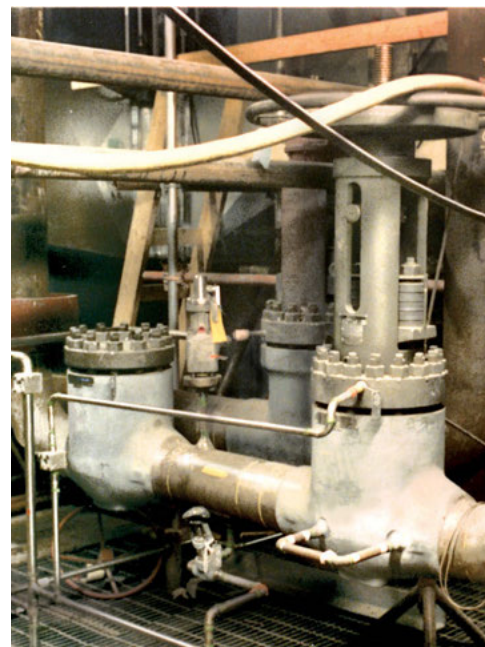
RIGHT: In 1989, Velan and GEC Alsthom acquired on a 50/50 basis the nuclear and high performance valve division of Schlumberger in Lyon, France, to form a new company named GEC Alsthom-Velan. In 1991, the Velan-Rateau plant was moved from La Baule to Lyon. The pictures at the right also show the plant in Lyon and a panoramic view of part of the shop floor.



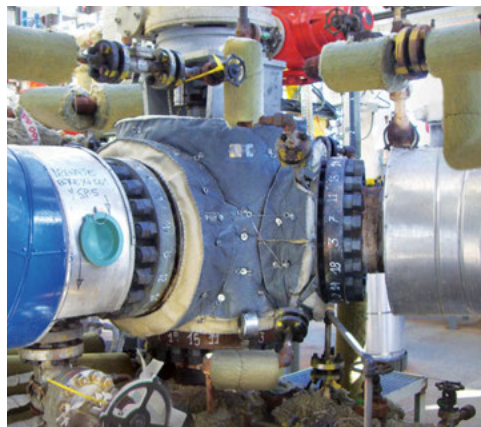


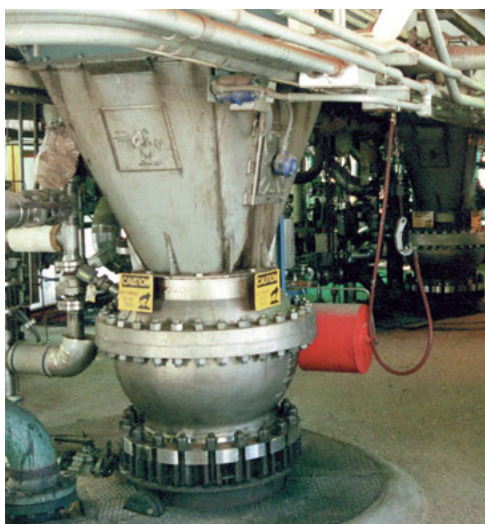
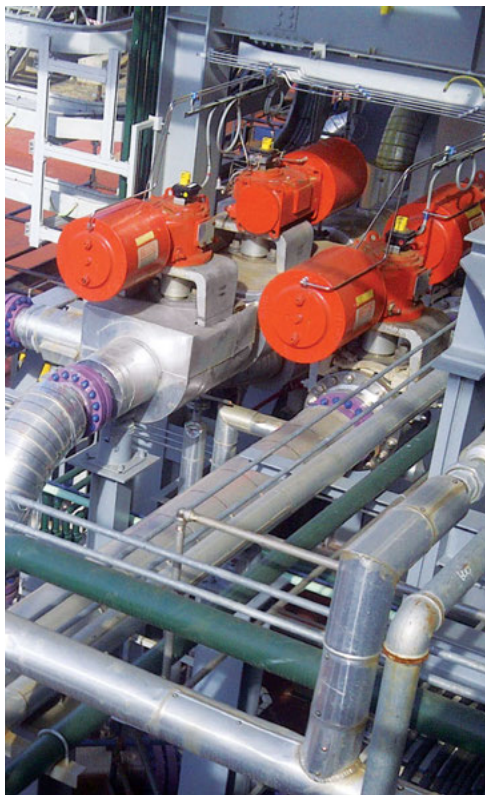
Velan valves in service

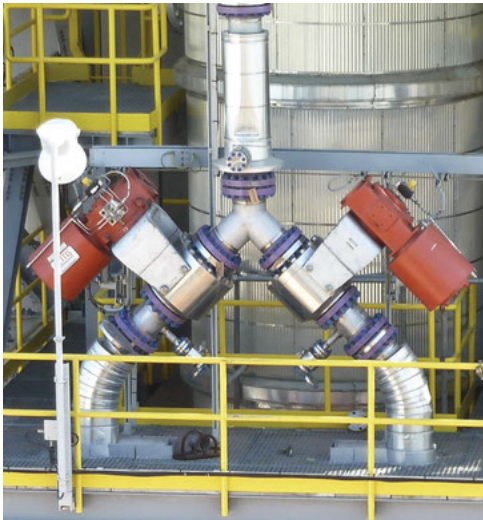
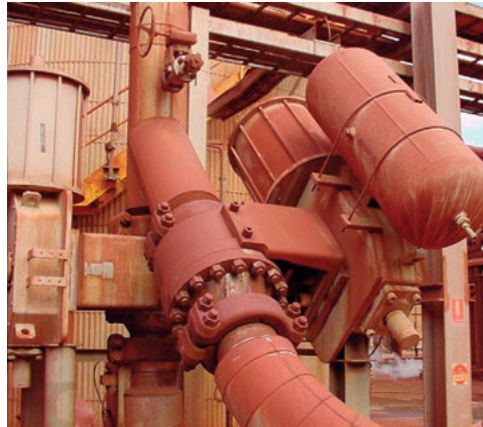




Velan valves in service







VELAN UNIVERSAL STEAM TRAPS

will keep power and heat ready for duty aboard the world's largest warship the U.S.S. FORRESTAL



TYPE 4-PORT, FORGED
150-2,500 LB.

TYPE 10-PORT, FORGED
150-2,500 LB.

The U.S.S. FORRESTAL—world's largest aircraft carrier—will be a symbol of the power and readiness of the emerging U.S. Navy. Its design team is so confident of the quality of the traps that the largest warship in the world. Four traps will be used in the 10 emergency places in its hull, in its engine room. Only the most reliable and dependable steam traps are chosen for the largest warship. We are proud to have been selected with the task of building and supplying all steam traps for the U.S.S. Forrestal. Dependability and quality are the keywords in Velan Engineering and Velan Steam Traps. These traps that only need with long, efficient service.

VELAN ENGINEERING LTD.
1100 WINDY HILL, SUITE 100, LAMAR, ALABAMA 36006
TEL: (205) 336-1100
FAX: (205) 336-1101
AS APPEARED IN THE JUNE ISSUE OF POWER MAGAZINE

We're bigger than you think

Velan has grown to be North America's largest manufacturer of steel gate, globe, check valves and the most important to the power industry. The company's customer service is the best in the industry. The best kept secret is the fact that Velan is a family-owned business.

Velan has been named "Top 100" because we spend most of our money on equipment and R & D, not advertising. Our four manufacturing plants in the United States and Canada have 54 CNC machines, as well as many special machines for special applications. Each machine is a quality product in a competitive price.

Our R & D department has 10 people working full-time to develop new and innovative designs and to improve manufacturing processes. Our engineering and design department has 10 people working full-time to develop new and innovative designs and to improve manufacturing processes. Our engineering and design department has 10 people working full-time to develop new and innovative designs and to improve manufacturing processes.

We have more than 100 employees in North America, working together in a comprehensive network of engineering and design. We are proud to have been selected with the task of building and supplying all steam traps for the U.S.S. Forrestal. Dependability and quality are the keywords in Velan Engineering and Velan Steam Traps. These traps that only need with long, efficient service.

VELAN VALVES

VELAN A TOUGH BREED OF RUGGED & RELIABLE FORGED VALVES

GATE, GLOBE, CHECK 12"-24" IN CARBON, ALLOY AND STAINLESS STEEL, ANSI CLASSES 600-4000

FOR THE POWER INDUSTRY



Velan's tough breed of rugged and reliable forged valves is the most important to the power industry. The company's customer service is the best in the industry. The best kept secret is the fact that Velan is a family-owned business.

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VELAN VALVES

VELAN Global Leader in Valves for Delayed Coker Applications

Consolidated Delayed Coking Technology Symposium 2007



Velan Ball Valves Ensure Safe & Reliable Operation in 15 Consol Petroleum's Delayed Coker Applications

Velan Ball Valves are currently installed in 15 Consol Petroleum's Delayed Coker Applications. This includes over 200 heavy metal valves, some of which have been in service for over 30 years.

Velan's tough breed of rugged and reliable forged valves is the most important to the power industry. The company's customer service is the best in the industry. The best kept secret is the fact that Velan is a family-owned business.

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VELAN VALVES

COMPLETE LINE OF QUALITY FORGED AND CAST STEEL VALVES FOR OIL AND PETROCHEMICAL INDUSTRIES

PRESSURE CLASS ANSI 150-2,500 LB.

IN CARBON, ALLOY AND STAINLESS STEEL



150-2,500 LB.

CAST STEEL 24"-36" 150-2,500 LB.

1/4"-24"

GATE, GLOBE, CHECK AND BALL VALVES AT COMPETITIVE PRICING

VELAN

Before You Buy Metal-Seated Ball Valves Check Out the Competition

Now Velan offers competitively priced metal-seated ball valves for high-temperature, abrasive applications.



Velan's tough breed of rugged and reliable forged valves is the most important to the power industry. The company's customer service is the best in the industry. The best kept secret is the fact that Velan is a family-owned business.

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VELAN VALVES

7 good reasons for using Velan Valves

1. All product lines manufactured in four modern North American plants.
2. The widest product line offered from a single source manufacturer, including gate, globe, check, ball and knife gate valves.
3. The choice of largest valves up to 24" or cut valves up to 36", in carbon, alloy and stainless steel.
4. An extensive distribution network providing personalized and efficient service.
5. Competitive and realistic pricing due to state-of-the-art materials and state-of-the-art manufacturing technology.
6. Over 35 years of experience and growth due to our balanced competence in research, design, production and marketing.
7. A solid R & D program, developed over many years in a leading supplier of metal valves, ball valves, long service life and exceptional reliability in all applications.

VELAN VALVES

PERFORMANCE UNDER PRESSURE



Velan's tough breed of rugged and reliable forged valves is the most important to the power industry. The company's customer service is the best in the industry. The best kept secret is the fact that Velan is a family-owned business.


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VELAN VALVES

Protect Your Steam Using Equipment From Costly Freeze Up With VELAN FREEZE PROTECTOR



A SAFETY DEVICE Custom built for you

VELAN

SIX REASONS WHY VELAN IS THE ENGINEER'S CHOICE

1. Made in North America.
2. Wide Range of Products.
3. 25 Years of Engineering Experience.
4. Proven Performance.
5. Competitive Pricing.
6. Valves for Special Applications.

VELAN VALVES

VELAN MEMORY SEAL BALL VALVES SAFE. TIGHT. RELIABLE.



1. FIRE-SAFE BODY SEAL

2. TIGHT, SAFE STEM SEAL

3. PATENTED MEMORY SEAL SEALS

VELAN VALVE CORPORATION

Breathe easy...

High performance, low emissions.


Velan offers a full range of Gate, Globe, Check & Ball Valves, designed and cycle tested in our research lab for 0ppm gasket and 100ppm packing tightness.

...with the natural choice for low emissions.

VELAN VALVES

PULP FICTION

All Knife Gate Valves Are Created Equally




PULP FACTS

Only Velon Knife Gate Valves offer all of these features:

- ballbed based construction for true operation
- patented torque coupling provides positive seating
- patented gending internal thyms for better for pulp circulation
- easy operation, low maintenance and reduced torque friction due to conventional circular packing
- positive bidirectional shut-off

When it comes to valve quality, Velon is an **open** and **shut** case!



VELON VALVES

Velon Valve Incorporated 28 Avenue C, Grande Prairie, AB, 58109, Canada Tel. (844) 455-4700
Sales Tel. (254) 546-3446, Houston, Texas, Canada toll free (800)
An International ISO 9001 and ISO 14001 Certified Firm

Certified to ISO 9001

Circle Reader Service 402

[illegible]

Velan Spreads its Wings

Introducing...
The **TORQSEAL** Triple offset
metal-seated butterfly valve



Sizes
80mm - 900mm
(3" - 36")
Bi-directional
Zero Leakage
FireSafe to
API 607 REV.A
Classes 150-300

Available in
ASME B16.10
(flanged)
ISO 5752
(flanged)
Log & Weller

**VELAN
VALVES**
**PERFORMANCE
UNDER PRESSURE**

Velan Valves Corporation 94 Avenue C, Watkins, VT 0.14045-0102
Velden Inc. 7807 Cote de Liesse, Montreal, QC Canada H4T 1G3
For information call 514-748-7741
Fax 514-748-8820 or visit our web site: www.velan.com

Meet Chinese Panel, a hands-on member of the Velan Field Engineering team. From day one on the job, Chinese has spent most of his time literally up in the air, traveling from one challenging in field situation to another.

What you might not know about Chinese is that he was once an ace cricket player and knows exactly what a "crickety wicket" is. He also came by his trademark patience and perseverance early on in life. A good thing since the national-level lead match he used to last five whole days.

Velan: We're more than just valves.

Velan. Quality that lasts.
 +1 514 368 7763
www.velan.com

VELAN

[illegible]

For François Maréchal, one of Velan's Field Engineering Service Technicians, the term "structure of the job" has a whole new meaning. Over the years, he has been assigned to the job site by installation crew, erected power, worked with radiation levels so high he could only be on site for brief periods, learned how to avoid poisonous gases and spiders, and arranged to be met at the morning place with a fresh suitcase of clothes so he could travel to another project half way around the world.


When you might just know a little bit more in this class than the average of the job site. That's why he's just signed up for another brief mission to be at the request to install the underwater work when he's not literally up in the air.

Velan. We're more than just valves.

Velan. Quality that lasts.
 +1 514 748 7743
www.velan.com

VELAN

IT'S ELEMENTARY.



The advertisement features a collage of various industrial valves, including large gate valves, smaller globe valves, and a large vertical valve. In the foreground, four colorful alphabet blocks spell out 'ABCD'. The 'A' block is red with white lettering, 'B' is blue with white, 'C' is yellow with black, and 'D' is blue with white. The 'V' block is also visible, showing the 'VELAN VALVES' logo.

Velan Valves = high performance

The performance of Velan gate, globe, check ball and globe valves has been proven for the past 50 years. Velan's continuous innovation, application, engineering, manufacturing and service excellence has made Velan valves the most reliable valve service in the world. Velan's commitment to quality, performance, customer service, reliability, and innovation has made Velan valves the most reliable valve service in the world. Velan's commitment to quality, performance, customer service, reliability, and innovation has made Velan valves the most reliable valve service in the world.

It's the size of the largest and most comprehensive line of Valves in the world. Gate, globe, check and ball valves, as well as accessories such as gate valves, ranging in size from 1/2" to 60" and 1500 lbs.

Design innovations coupled with advanced manufacturing techniques allow Velan to deliver exceptional value at competitive prices.

In high performance, choose Velan Valves!

VELAN VALVES

Velan Valve Corporation 101 Astor Ct., Concord, Indiana, Inc., Williams, Vermont, U.S.A. 05495-9708
Welan Inc. 2125 Ward Avenue, Marietta, Ontario, Canada 446 170

For information call: 508 757-0100 or 1-800-368-0000 or visit our web site at www.velan.com
Certified to ISO 9001



At Velan, we know what it takes
to design and manufacture industry-leading
valves that stand the test of time.

After all, we've been doing just
that for over sixty years.

We offer a wide range of valves designed
to meet any industrial application. So next
time you're in the market for a reliable
metal-sealed valve that features bubble-tight
shut off in both directions, why not take our
"Sunquest" triple offset valves for a spin?

When it comes to valves that offer low
emissions, easy maintenance, and long and
reliable service, Velan is the name to trust.

Velan. Quality that lasts.

856-746-7743
www.velan.com
Circle 1 on Reader Service Card

VELAN

THE STANDARDS HAVE JUST BEEN RAISED



Yelval announces five-loaded bonnet bolting as a standard feature on pressure seal valves!



At Yelval, we've continued to make continuous improvements through product innovation. That's why we've developed and now offer our new five-loaded bonnet bolting technology as a standard feature on all of our larger commercial and industrial valves.

Loadable bonnet bolting is a positive trend in the pressure seal valve market, which demonstrates a commitment to continuous improvement. This innovative technology allows for easier inspection and maintenance, while increasing the versatility by replacing the bonnet bolts after the stem. The result is a performance-enhanced, longer-lasting valve that meets today's demanding

flow handling technology is clearly suited for applications where valves are subject to fluctuating pressures or frequent shuttling and that design will be your guarantee.

Yelval's ISO 9001 certification is a testament to our commitment to quality and the high standards of our manufacturing process. We are committed to providing the highest quality products and services to our customers.



ISO 9001 certification is a testament to our commitment to quality and the high standards of our manufacturing process. We are committed to providing the highest quality products and services to our customers.


YELVAL
VALVES

Yelval Valve Corporation, 10 Avenue C, Cleveland, Ohio 44115, USA. Tel: 216-231-2200
Yelval Inc., 2125 West 15th Avenue, Greeley, Colorado 80639, USA
Telex: 250000 YELVAL
Telex: 250000 YELVAL
Telex: 250000 YELVAL

ISO 9001


Circle 10 on Reader Service Card

In 1950, a new steam trap idea



establishes the foundation of the Velan corporation.


Today 50 years later



**One of the World's Leading Manufacturers
of Industrial Valves**

*sold around the world and manufactured in 11 specialized plants
including four in Canada.*

Design Innovations and Quality
are the cornerstones of Velan's success.

 **VELAN**

Web: <http://www.velan.com>
Tel: (514) 748-7742 Fax: (514) 748-8828



At Velan, we know what it takes
to design and manufacture industry-leading
valves that stand the test of time.

After all, we've been doing just
that for over sixty years.

We offer a wide range of valves designed
to meet any industrial application.
So next time you're in the market for
a high-pressure, high-temperature
valve that delivers unparalleled
performance in a variety of
demanding applications, you can
rely on our pressure seal valves.

When it comes to valves that offer
low emissions, easy maintenance,
and long and reliable service,
Velan is the name to trust.

Velan. Quality that lasts.

+1 514 748 7742
www.velan.com

VELAN



Meet Luc Verharen, a key member of Velan's engineering and R&D team. During his years at Velan, Luc has dedicated himself to R&D in general and, in particular, to ensuring Velan's coating expertise stays ahead of the curve, working with other like-minded brands across the industry.

What you might not know about Luc is that he may just be the last man on the planet who refuses to have a TV in his house and a car in his driveway.

Velan. We're more than just valves.

Velan. Quality that lasts.
+1 514 763 7763
www.velan.com

VELAN



1990s

Going from strength to strength

In the 1990s, Velan again shifted into high gear, capitalizing on the hard work and achievements of the preceding four decades.

The new decade was one of expansion, with a new foundry and plant in Asia and four strategic acquisitions strengthening Velan's global network. New product lines were added to the Velan portfolio, new industry standards were met, and important new agreements with industry were signed.

Accolades included Velan's being named as one of Canada's best-managed private companies, as its sales doubled over a five-year period. In Quebec, a business magazine listed Velan as one of the top 15 Quebec companies of the century along with such renowned companies as Bombardier, RBC, Power Corp., SNC-Lavalin, and Bell Canada Enterprises. In 1996, Velan went public on the Toronto Stock Exchange.

The photo of A.K. Velan on the left was taken in 1991 by the Canadian Department of International Trade. Velan was one of 15 companies who received the Canada Export Award for its ability to successfully export products and services worldwide.

Years later his sons presented him with a painting by Canadian artist Christian Nicholson that was based on the original photo. The painting hangs in the Head Office reception area.

TOP RIGHT: A.K. Velan accepts the 1991 Canada Export Award from Michael J. Wilson (right), the Minister of Industry, Science, and Technology and Minister for International Trade.



1990

Velan introduces the Total Quality Management (TQM) program

1991

Velan is the first North American valve manufacturer to obtain ISO 9001 certification

The company opens a new plant in Taiwan to produce small ball valves

1995

Velan is named one of Canada's 50 best-managed private companies

1996

Velan goes public on the Toronto Stock Exchange (TSX)

Juwon foundry is started in South Korea

1997

Velan acquires Proquip, a leading dual-plate check valve manufacturer

The company acquires Securamax, a manufacturer of severe service metal-seated ball valves

1998

Velan obtains Global Procurement Agreement (GPA) from Mitsubishi Heavy Industries (MHI)

1999

Two companies in France are acquired: Adareg and Bouvier Darling



In 1990, Velan acquired 50% of Valvac, a small ball valve manufacturer in Taiwan owned by Brian Jones (above left), an Australian-born engineer living in the country. The 50/50 company was named Velan-Valvac and was managed by Brian, who had many years of experience in ball valve design and manufacturing. In 2004, Velan increased its ownership to 75%.

LEFT: Stephen Cherlet (left) and Andy Smith (right) presenting Brian with an award recognizing his outstanding efforts in managing our Taiwan partnership over the last 25 years.



In the early 1990s, management at the Bechtel division responsible for bidding on and building power plants decided to enter into a Master Pricing Agreement (MPA) with a valve manufacturer. The goal was to reduce the front-end time and cost normally required for the enquiry/quotation process as well as the subsequent creation and approval of project drawings and quality assurance procedures.

Velan was selected for the MPA and this agreement lasted just over 10 years, from 1994 to 2004. During that time, Velan supplied approximately \$64 million of valves for over 40 projects.

Velan continues to work with Bechtel on such important projects as Hanford Waste Treatment. Velan received the Bechtel Key Supplier Award in 2012 and 2013, “in recognition of valuable contributions to Bechtel power projects.”



Members of the Bechtel and Velan management teams gather in Gaithersburg, Maryland, to kick off the new agreement.



A.K. Velan receiving the 1994–1995 Strategic Supplier Certificate from Hank Gerdes, Manager of Procurement, and head of the MPA group at Bechtel.



VELANNEWS

JUNE 1991

PUBLISHED BY VELAN, MANUFACTURER OF QUALITY VALVES FOR 40 YEARS

NO. 5

Velan Receives ISO 9001 Accreditation

Velan has joined a small and very select group of North American manufacturers which are certified to ISO 9001 Quality Standards. The new certification will allow Velan to sell valves in all countries which require ISO 9001 approval.

The ISO (International Organization for Standardization) is a worldwide federation of national standards organizations. 93 countries use the ISO standards, including all the members of the European Economic Community. The EEC adopted ISO in order to maintain equal quality standards while eliminating barriers to free trade between member nations.

Unlike most North American standards, which are based on end-of-the-line inspection programs, the ISO 9000 series covers everything from purchasing to service and uses performance indexing, statistical process controls and other techniques of Total Quality Management (TQM) to ensure built-in quality.

The audit was performed by Bureau Veritas Quality International (BVQI) which is one of the 30 agencies worldwide authorized to award ISO accreditation. BVQI representatives spent two full days at each of the North American plants inspecting all phases of the manufacturing process. They commended Velan for (1) the strength of its employee training program (2) the trace-

Continued on page 6



A.K. Velan proudly displays the Newport News Shipbuilding "1990 Supplier of the Year Award."

Velan Valve Corp. Named "Supplier of the Year"

Newport News Shipbuilding has named the Velan Valve Corporation as one of its "Top 10 Suppliers" for 1990. Newport News is the world's largest shipyard, and the builder of U.S. Navy nuclear aircraft carriers and submarines.

Newport News praised Velan for its "quality, schedule support and contribution to cost reduction."

A.K. Velan, President, accepted the award for Velan at a special ceremony on April 5th in Newport News, Virginia.

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page 5

Bureau Veritas Quality International Limited



Certificate of Approval

BUREAU VERITAS QUALITY INTERNATIONAL
certifies that the Quality Management System of
VELAN INC.,
2125 WARD AVENUE, MONTREAL, QUEBEC,
CANADA,

has been assessed and found to be
in accordance with the requirements of

EN 29001-1987 ISO 9001-1987 BS 5750:PART 1:1987

with respect to the following scope of supply:-

DESIGN, MANUFACTURE AND SUPPLY OF
CAST OR FORGED STEEL GATE, GLOBE, CHECK, BALL AND
KNIFE VALVES.

This Certificate is valid for a period of three years from

21ST MAY, 1991.

subject to continued satisfactory operation of
the supplier's Quality Management System.



MANAGING DIRECTOR

For BUREAU VERITAS QUALITY INTERNATIONAL

21ST MAY, 1991.

DATE

Certificate No: 528 (PLANT 1)

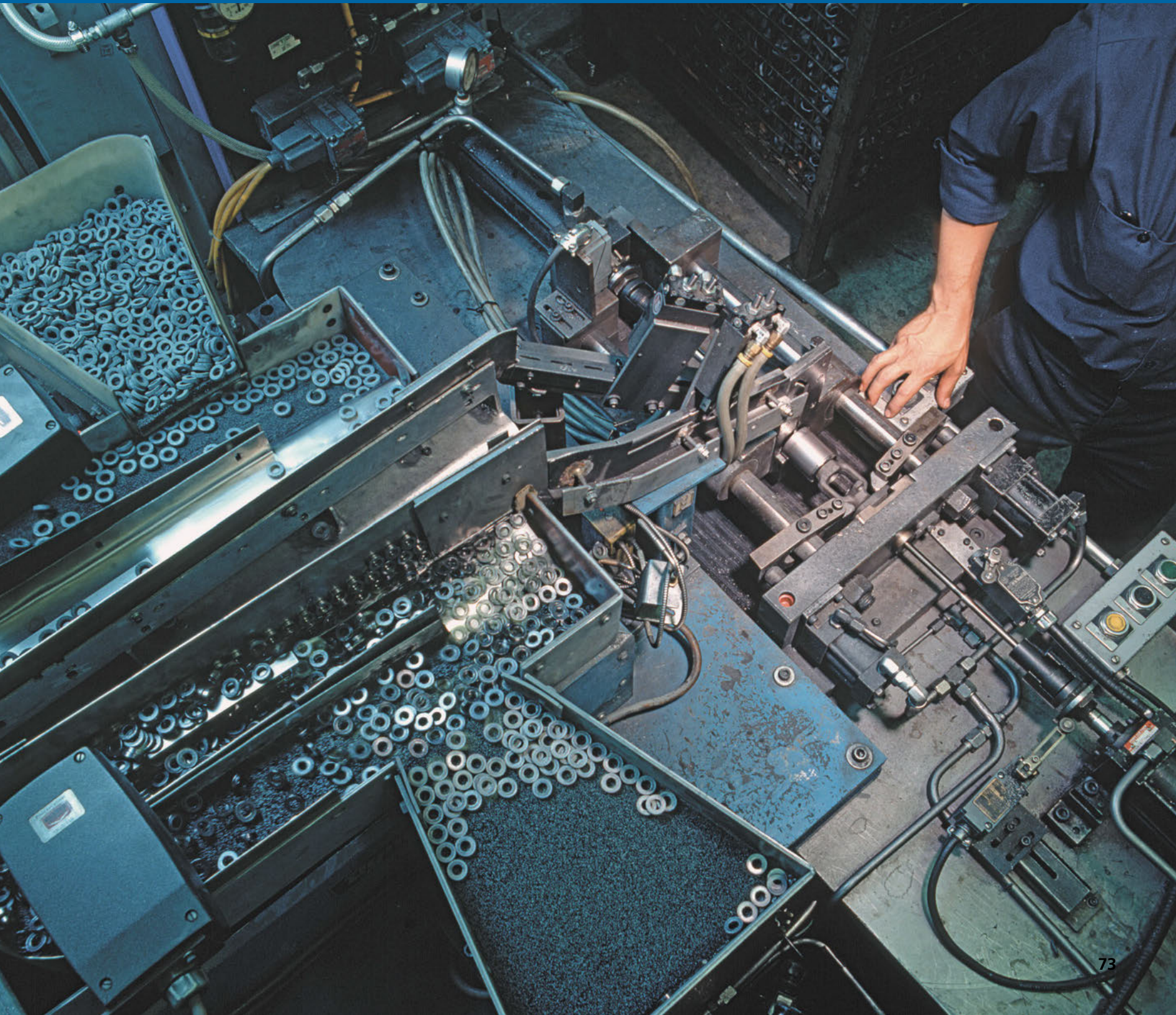
5/91/01

Accredited by the Dutch Council for Certification

Velanews, the company's newsletter, announces Velan's ISO 9001 accreditation. Velan was the first North American valve manufacturer to obtain this important certification. In the same issue, A.K. Velan is pictured displaying the Newport News Shipbuilding 1990 Supplier of the Year award.

RIGHT: Graphite packing rings are prepared for assembly into small forged bonnets. Each packing ring is individually compressed for better tightness.

1990s



VELAN

▼ Total Quality Commitment ▼

Velan Total Quality Program

Our aim is to offer products and services that not only meet but clearly exceed the expectations of our customers.

Through training, teamwork, and performance, our employees strive to achieve continuous improvement of all processes.

Our goal is total quality and on-time delivery; our method is total commitment.

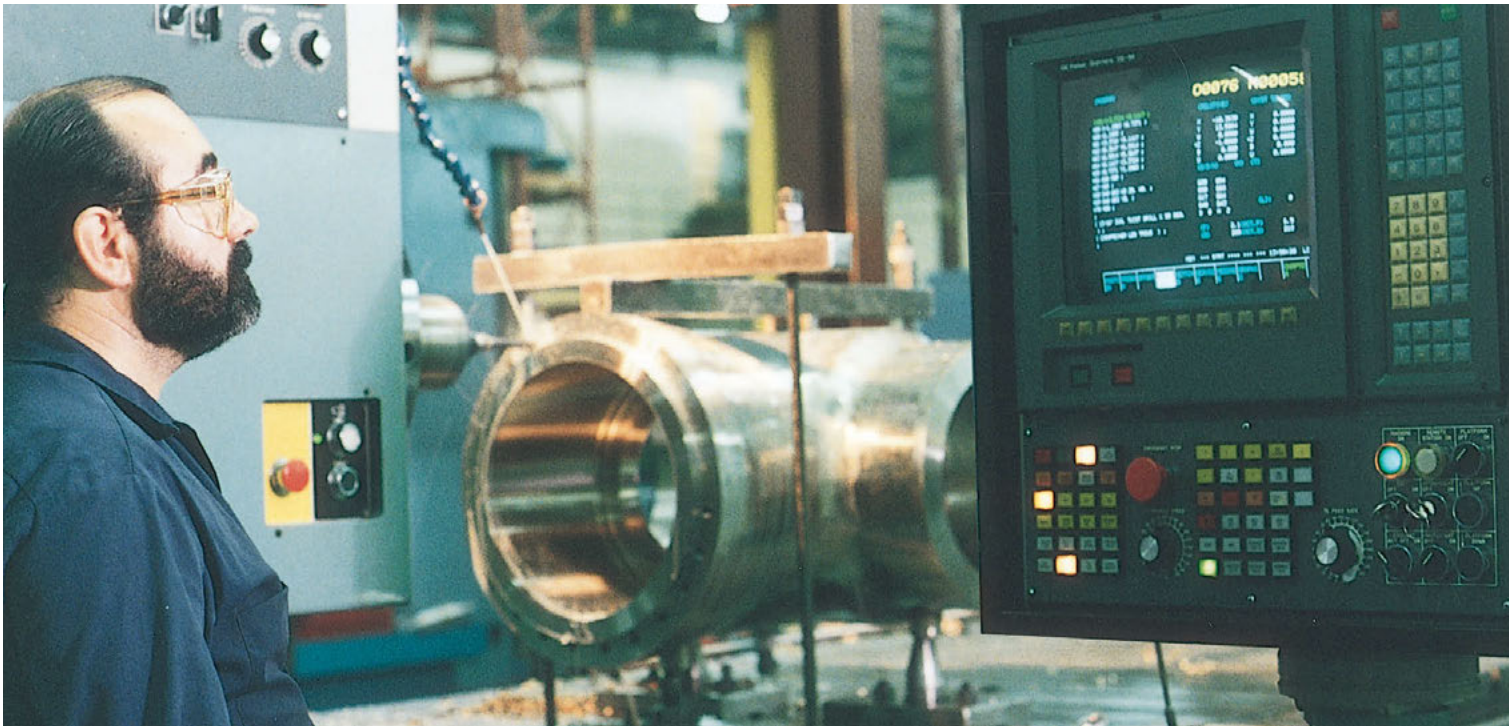


On-line statistical process control (SPC) is used on a y-pattern globe body after machining.



Velan launched its Total Quality Management (TQM) program in 1990, which was a crucial element in obtaining ISO 9001 certification in 1991. The first year was devoted to training; 475 employees graduated from the TQM improvement training seminar. Later, all employees were trained. Rana Bose was appointed VP of Total Process Improvement (TPI) and led the training program and the continuous improvement process.

Each plant established TQM teams, and implemented on-line real-time SPC (Statistical Process Control), the employee suggestion program, and a “root-cause” approach to product quality improvement.



An employee operating a computer numerical control (CNC) horizontal boring mill.

RIGHT: Velan began using computer-aided design (CAD) software to assist in the creation, modification, analysis, and optimization of its valve designs. CAD was also used to increase the productivity of its machining and other manufacturing operations.





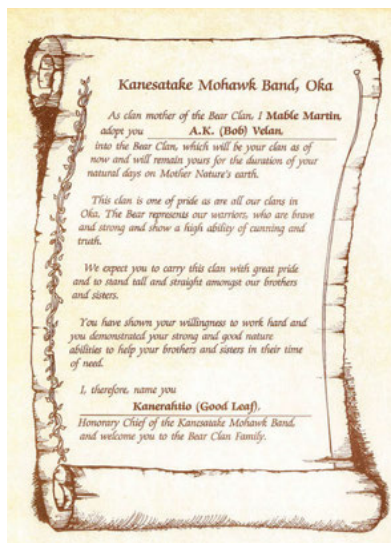


Velan's Head Office and Plant 5 in Montreal, Quebec. Opened on December 3, 1999, the Head Office moved to its current location after many years of sharing space with Plant 1.

LEFT: An overhead view of the semi-automatic assembly and testing area of Plant 1.

RIGHT: In 1992, the company received the President's Award from Tennessee Eastman Co. for its Outstanding Quality Improvement Project. At the award ceremony, Tennessee Eastman presented a video of how their maintenance team successfully teamed up with Velan to solve its problems with competitors' valves failing in dope service. The video included a sketch of a plane with the words "Montreal or Bust" written on it.





Vinson Supply became Velan's first major distributor in the U.S. back in 1980. In 1989, Vinson decided to distribute Velan's Memoryseal® ball valves in addition to the other lines the distributor was carrying.

Claude Smith came up with an innovative idea to launch the product line throughout the Vinson stores. At a sales meeting in Dallas, Texas, Sheriff Claude Smith rounded up a posse to go after the notorious fugitive James Berry. He also enlisted the support of honorary Chief Good Leaf (AKA A.K.) of the Mohawk Bear Clan. The sheriff and his posse succeeded in becoming Velan's largest ball valve distributor.

In 1995, Claude Smith became the first recipient of Velan's Distributor Recognition Award. Vinson was later acquired by Red Man Pipe and Supply, which eventually merged with McJunkin to become MRC. MRC continues to distribute Velan valves, including Memoryseal® ball valves.

LEFT: As part of the new Vinson-Velan Strategic Alliance, more than 50 Vinson sales people visited Velan in August of 1992 for a three-day training seminar.

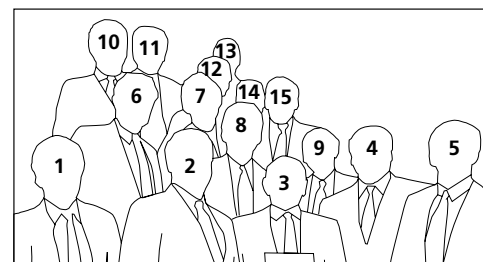




In 1993, Velan was accepted into the Dow Supplier Partnership Program, instituted in 1988, for cast steel and small forged valves. Velan was the only company to be approved in two categories, and it surpassed the Dow point requirements, largely due to enhancements to its Total Quality Management (TQM) program. Working on the Dow Supplier Partnership program was the main impetus for Velan to get certified to ISO 9001 at such an early date and start its TQM program.



During the 90s, Velan signed a global supply agreement with Dow Chemical, and Velan continues to supply valves to Dow today. Most recently, Velan worked with Dow on two major projects—Gulfstream in the U.S. and Sadara in Saudi Arabia (a huge integrated chemical complex in Jubail).



- | | |
|--------------------------|----------------------|
| 1. John Farrell | 9. Peter Velan |
| 2. Oran Suire (Dow) | 10. Rein Maasik |
| 3. A.K. Velan | 11. Jean-Paul Béala |
| 4. Tary Schumacher (Dow) | 12. Clément Lévesque |
| 5. Ivan Velan | 13. Douglas McGregor |
| 6. Rana Bose | 14. André Patenaude |
| 7. Zoltan Palko | 15. John Tsesmelis |
| 8. Frank Keegan | |

This prospectus contains a public offering of these securities only in those jurisdictions where they may be lawfully offered for sale and, should only by persons permitted to sell such securities. No securities commission or similar authority in Canada has in any way passed upon the merits of the securities offered hereunder and any representation to the contrary is an offence. These securities have not been and will not be registered under the U.S. Securities Act of 1933, as amended, and, subject to certain exceptions, may not be offered or sold within the United States.

Initial Public Offering

September 18, 1996

VELAN

Velan Inc.

\$96,030,000

5,820,000 Subordinate Voting Shares

There is currently no market through which the Subordinate Voting Shares may be sold. The offering price of the Subordinate Voting Shares was determined by negotiation between Velan Inc. ("Velan") and the Underwriters. After giving effect to the DB Share Repurchase and this Offering, the offering price of each Subordinate Voting Share exceeds the pro-forma consolidated net tangible book value thereof at May 31, 1996 by \$12.09, representing a dilution factor of 73.25%. See "The Company - Repurchase of the DB Shares" and "Dilution". Under applicable law, an offer to purchase Multiple Voting Shares would not necessarily result in an offer to purchase Subordinate Voting Shares. The principal shareholder of Velan will undertake not to sell its Multiple Voting Shares in certain circumstances, unless an offer, all of the material terms of which are identical, is made to the holders of Subordinate Voting Shares. See "Description of Share Capital - Underwritings in Favor of Holders of Subordinate Voting Shares". There are certain risk factors that should be considered in connection with an investment in the Subordinate Voting Shares. See "Risk Factors".

The Montreal Exchange and The Toronto Stock Exchange have conditionally approved the listing of the Subordinate Voting Shares, subject to the fulfillment of certain requirements on or before December 15, 1996. In the opinion of counsel, the Subordinate Voting Shares offered hereby will, at the date of issue, qualify as eligible investments under certain statutes. See "Eligibility for Investment". Nishith Bharti Inc., a member of the underwriting group, is an indirect majority-owned subsidiary of a Canadian chartered bank. The net proceeds of this Offering will be used to repay bridge loan indebtedness to this bank to be incurred to finance in part the DB Share Repurchase pending completion of the Offering. See "Use of Proceeds", "Plan of Distribution" and "The Company - Repurchase of the DB Shares". RBC Dominion Securities Inc. and Levesque Beaudin Gauthier Inc., other members of the underwriting group, are indirect majority-owned subsidiaries of Canadian chartered banks and Velan has indebtedness outstanding to such banks. These Underwriters will not receive any benefit in connection with this Offering other than their respective portions of the Underwriters' fee. See "Plan of Distribution".

Price: \$16.50 per Subordinate Voting Share

	Price to the Public	Underwriters' Fee	Net Proceeds to Velan
Per Subordinate Voting Share	\$ 16.50	\$ 0.825	\$ 15.675
Total	\$ 96,030,000	\$ 4,801,500	\$ 91,228,500

(1) Before deducting estimated expenses of issue of approximately \$1,000,000 which, together with the Underwriters' fee, will be paid out of the general funds of Velan.

(2) Velan has granted to the Underwriters an option, exercisable for a period of 60 days after the closing of the Offering, to purchase up to an aggregate of 582,000 Subordinate Voting Shares (representing 10% of the Subordinate Voting Shares offered hereby) to cover over-allotments, if any, in connection with this Offering. Subordinate Voting Shares purchased to cover over-allotments are qualified by this prospectus. If the Underwriters exercise this option in full, the total price to the public, Underwriters' fee and net proceeds to Velan will be \$105,630,000, \$5,281,500 and \$100,348,500 respectively. See "Plan of Distribution".

The Underwriters, as principals, conditionally offer the Subordinate Voting Shares, subject to prior sale, if, as and when issued and sold by Velan and delivered to and accepted by the Underwriters in accordance with the conditions contained in the Underwriting Agreement referred to under "Plan of Distribution" and subject to the approval of certain legal matters on behalf of Velan by Goodman Phillips & Vinberg, Montreal, a general partnership, and on behalf of the Underwriters by McCarthy Tétreault, Montreal.

Subscriptions will be received subject to rejection or allotment in whole or in part and the right is reserved to close the subscription books at any time without notice. It is expected that share certificates evidencing the Subordinate Voting Shares will be available for delivery on the closing date of this Offering which is expected to be on or about September 27, 1996, but no later than October 1, 1996.



In 1996, we decided to go public to buy out a partner in the business. Back in 1980, the family sold 50% of the business to Deutsche Babcock. In 1996, our partner got into financial trouble so we went public on the Toronto Stock Exchange to raise money to buy the troubled company's share. With the proceeds from the IPO, we managed to buy them out and retain about 72% in Velan family ownership: We continue to own over 70% of the company.

I found the going public process very interesting and engaging, everything from the initial meetings with the investment bankers to establish feasibility to the long, morning-to-late-at-night meetings with lawyers and bankers to work out the prospectus and legal agreements, the IPO roadshow, and the visit to the stock exchange floor. At the time, we had a promotional item that was a small hand squeeze ball with our logo and the slogan "Performance Under Pressure" on it, which we gave out to people on the stock exchange floor. They ended up throwing the balls around the stock exchange floor on the opening trading day.

The positive part of going public was that we were able to buy out our partner. The challenge has been that since the Enron debacle and the resultant passage of Sarbanes-Oxley and similar legislation in Canada, it has been much more demanding and stressful to operate as a publicly traded company.

Tom Velan

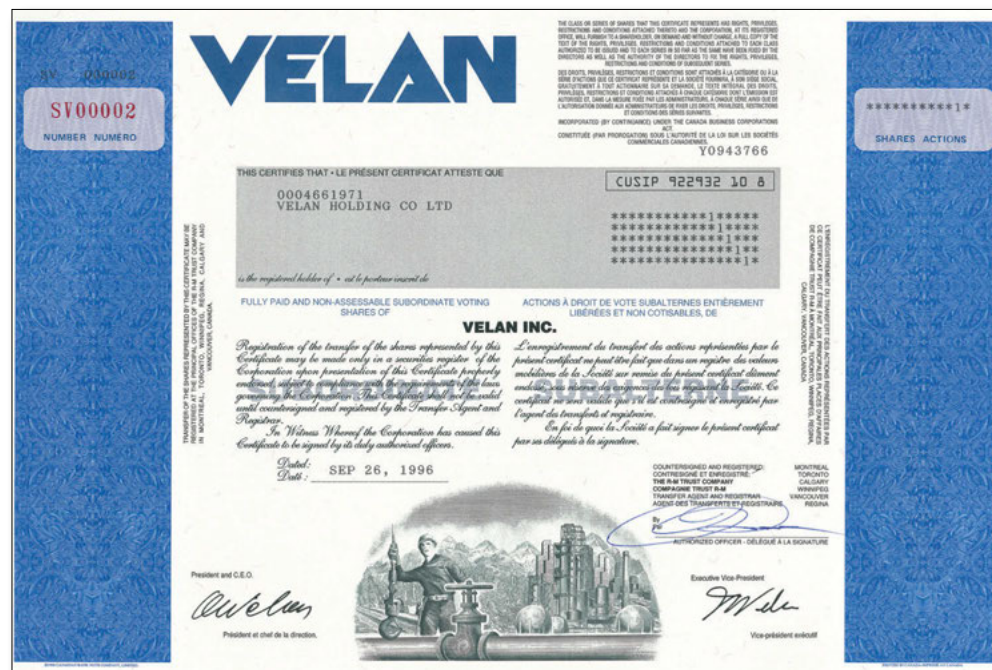
Front page of the Velan prospectus for the IPO published September 18, 1996. There were 6,402,000 subordinate voting shares at \$16.50 each, which meant the IPO raised \$105.6 million. From the proceeds, \$100 million was used to buy Velan's partner's 50% share of the company and the rest went to pay all the costs of going public.



Velan's "Performance Under Pressure" squeeze ball.



The Velan IPO team visits the Montreal Stock Exchange floor, to see one of the first trades of Velan stock. First on the left is Steve McCulloch of Midland Walwyn (and later a Velan Board member); third from the left is Ken McKinnon from Midland Walwyn (and a current Board member); fifth from the left is Michael Vineberg (Velan's longtime lawyer who also served as a Velan Board member for the first decade that Velan was a public company).



Entrepreneurs facing new challenges

Growing pressures from new markets, governments

ROD MCQUEEN
The Financial Post

Canadian manufacturers have only a precious few years to position themselves for the final, fatal phase of Third World competition, says Karel Velan, president and chief executive of Velan Inc., a Montreal-based maker of industrial steel valves.

"Canada is already a de-industrialized country. Our firm would not be able to exist and have competitive prices if we had to rely on buying and producing in North America. Procurement of materials must be world-wide."

In the 1950s, 27% of Canadians worked in manufacturing; now, the figure is 15%. Moreover, 75% of all Canada's machinery is imported from elsewhere, so it's equally available to anyone, Velan notes.

"At the moment, we have higher productivity than the Third World because our equipment is



Our third annual guide to the most entrepreneurial innovative, productive and profitable firms. Page 11.

better. They cannot afford the equipment; otherwise, the Chinese would take over." One competitor in China, for example, has \$42 million in sales, but 3,500 employees.

To position itself against the day China does have top equipment, Velan now does 20% of production in low-wage countries such as Taiwan and Korea. In November, he visited China, looking to establish a joint venture.

Many winners of this year's 50 best managed private companies are equally worried about their position in a shrinking world of global competition made worse by the deadening hand of government. "I have grave concerns about political instability. We could be in for a rough ride," says Paul Langston, president and chief executive of Prototype Circuits Inc. of Toronto.

See GLOBAL: page 2



Karel Velan: 'Canada already de-industrialized.'

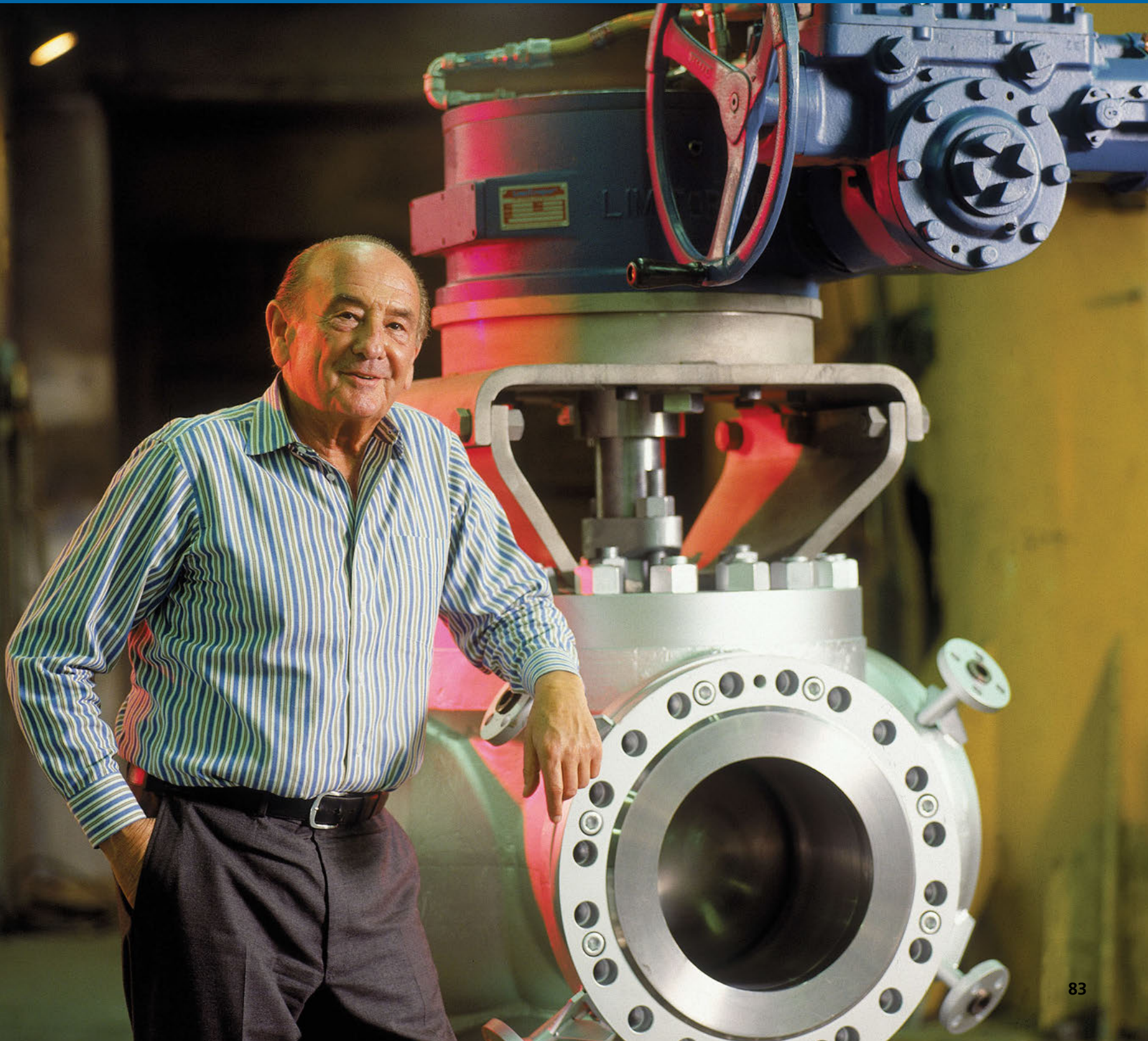


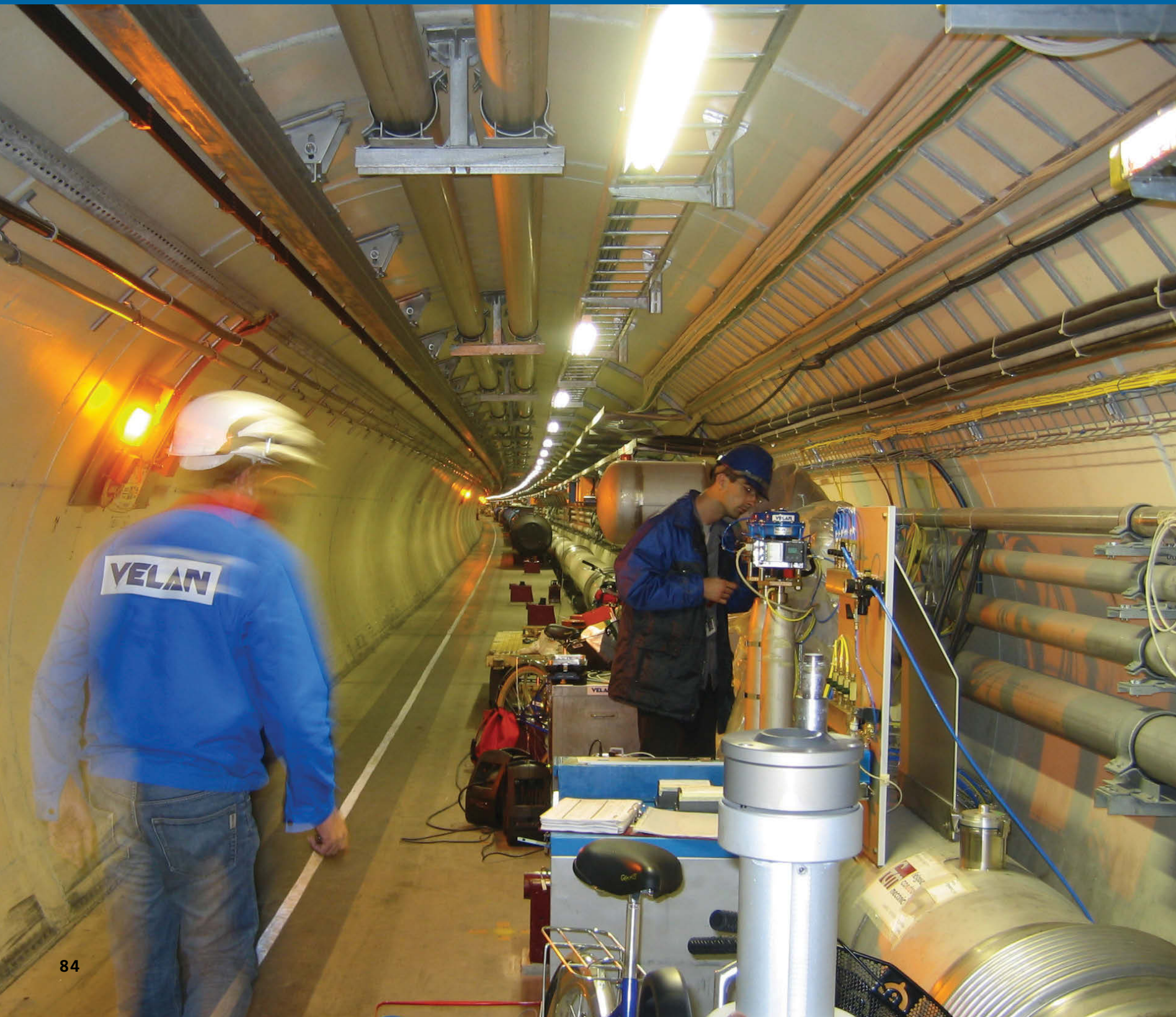
In 1995, Velan was chosen as one of Canada's best-managed private companies.



LEFT: Velan is featured in the May 1996 issue of *Valve World* magazine with a cover story about the company. The four-page article focuses on Velan as a leader in valve innovation. From left to right: Ivan, A.K., Peter, and Tom Velan.

RIGHT: A.K. Velan stands proudly beside a large coker ball valve. Velan would go on to become the world leader in coker ball valves with installations in over 160 refineries.





2000s

As the world gets smaller, Velan gets bigger

In the first decade of the new millennium, the trend toward globalization continued and one consequence was consolidation in the valve industry. Velan was a part of the process, acquiring a controlling share of the French valve company Segault. Expansion of the company's interests in Canada and abroad also continued, with Velan opening a second plant in South Korea and enlarging its facilities in Montreal.

The worldwide search for new energy sources was a driver in the oil and petrochemical industries, creating demand for new and improved valves, which Velan was able to fill. Velan valves were also key components in the creation of the CERN Large Hadron Collider on the Swiss/French border.

LEFT: Installing cryogenic control and quench relief valves inside the CERN Large Hadron Collider. The world's largest, fastest, and coldest accelerator of nuclear particles has 2,500 Velan bellows seal valves controlling the flow of 184,920 gallons (700,000 liters) of liquid helium to cool down and optimize the performance of 1,700 magnets to -456°F (-271°C).

Velan is proud to be a supplier to this massive scientific endeavour where thousands of scientists supported by 21 member countries are probing the fundamental structure of the universe. CERN is using the world's largest and most complex scientific instruments to study

collisions of particles accelerated to very close to the speed of light.

Back in 1989, Tim Berners-Lee, a British scientist working at CERN, invented the "World Wide Web" to enable automatic information-sharing between scientists working in different countries. The first website at CERN, and in the world, was hosted on Berners-Lee's NeXT computer. In April 1993, CERN announced that the world wide web technology would be available for anyone to use on a royalty-free basis. It is amazing to witness how the web has grown so much and the influence it has had over the last 20 years.



2000

Velan celebrates its 50th anniversary
The company acquires Alstom's 50% ownership to own Velan S.A.S. 100%
BP awards "environmentally friendly valve" status to Velan's cast steel valves

2003

Tom Velan becomes President of Velan

2004

Velan revitalizes its TPI (Total Process Improvement) and Lean manufacturing program

2006

A.K. Velan awarded first "Valve World Fellow" prize by Valve World

2007

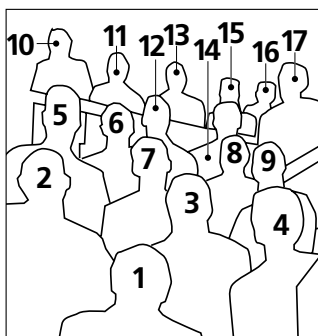
Controlling share of Segault, a French manufacturer of valves for the nuclear industry and navy is acquired

2009

Expansion in Montreal: Plant 5 extension



Velan was featured for a second time on the cover of *Valve World* magazine in its October 2000 issue. The article, "Velan celebrates the first fifty years," mentions the company's new products and its continuous focus on innovation and ensuring consistently high-quality industrial valve manufacturing.



The management team in 2000:

1. A.K. Velan, President and CEO
2. Ewart François, VP, Quality Assurance
3. Pierre Garneau, Plant 5 General Manager
4. Tom Velan, Exec. VP, Export Sales/Overseas Ops.
5. Steve Farrell, CFO
6. Ivan Velan, Exec. VP, North American Sales
7. Renald Roussel, Plant 2 General Manager
8. Peter Velan, Exec. VP, Production and Engineering
9. Stephen Cherlet, VP Information Technology
10. Andy Smith, VP, Procurement
11. Mike Parsons, Plant 3 General Manager
12. Serge Groulx, Asst. Plant 1 General Manager
13. Gary Cuthill, Plant 4 General Manager
14. John Tsesmelis, Plant 1 General Manager
15. Mike Zivic, VP, International Sales
16. Woody Bowler, VP, Quarter-turn
17. Rana Bose, VP, Total Process Improvement



Fugitive-emissions R&D testing setup on a Velan 3" (80 mm) Class 600 gate valve, as part of Velan's ISO-15848-1 qualification program.

RIGHT: Members of Velan's Engineering Department test an automated valve solution designed specifically for a leading international architect/engineering firm. It was used for turbine bypass inlet isolation, a notably difficult power plant application.

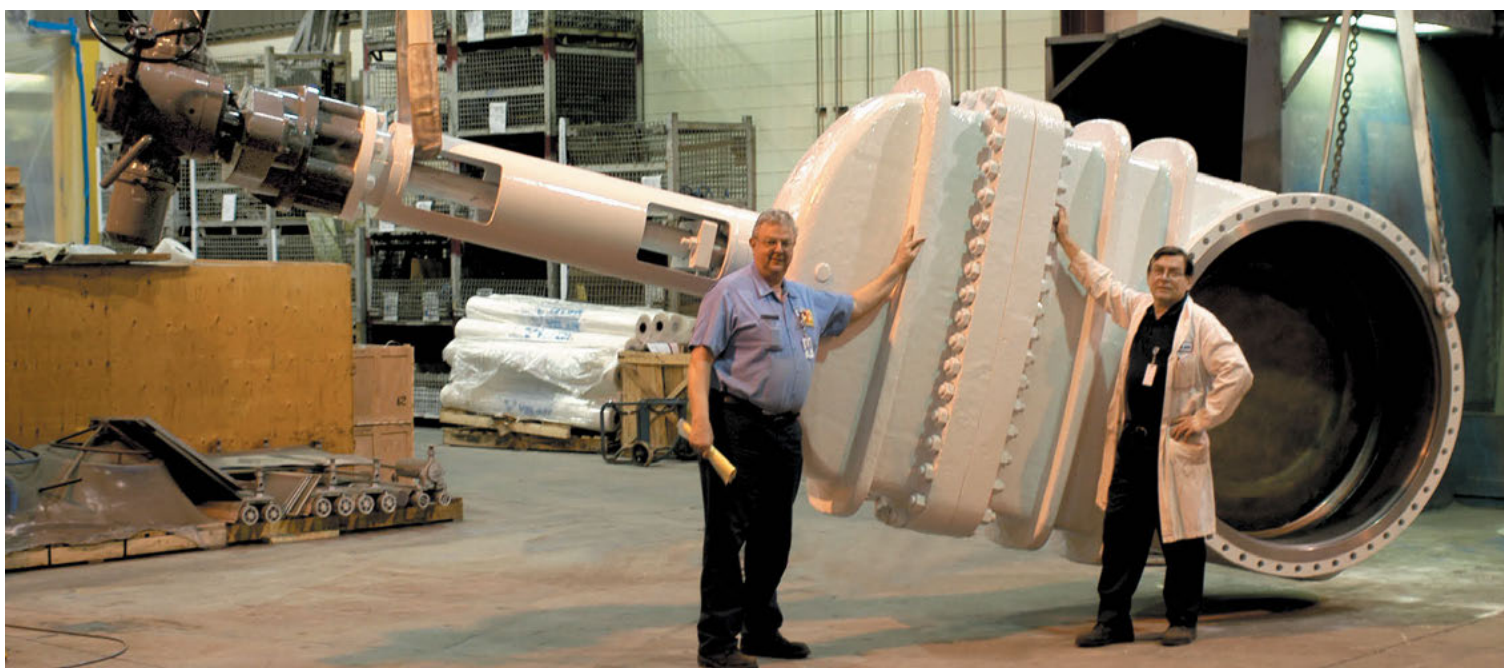


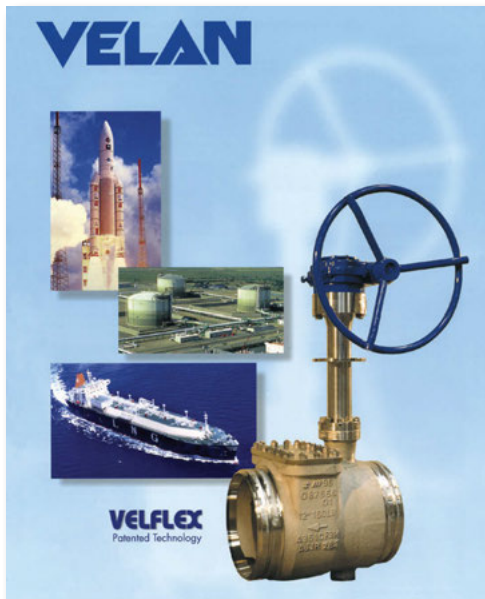


In 2004, Velan revitalized its Lean manufacturing program, which started in the 90s as part of the Total Quality Management (TQM) initiative. Rob Velan took on a leadership role in the implementation of the Total Process Improvement (TPI) process. Employees were trained in value stream mapping, continuous flow manufacturing, setup reduction, 5S, one-piece flow, and other Lean concepts.

Certified Black Belts and Green Belts were developed in each plant. As shown in the picture at the left, A.K. and Tom Velan participated along with other employees in a boat-building exercise to demonstrate the benefits of Lean and one-piece flow.

BOTTOM: Plant 2's Jacques Bellerose (left), a 43-year employee of Velan, stands proudly with his co-worker Lester Wosniak, who's been with the company for 46 years. They are part of the team that produced this large bolted bonnet cast steel valve, which is 25' 6" (7.77 m) high and weighs over 32,000 lbs (14 515 kg). It is currently in use in an ethane cracker project.





RIGHT: A Velflex side-entry (in-line repairable) high-performance butterfly valve following cryogenic seat leak testing. These valves provide service in many LNG receiving terminals.

BOTTOM: Dimension inspection of 42" (1050 mm) Velflex cryogenic butterfly body at Velan S.A.S., Lyon, France.



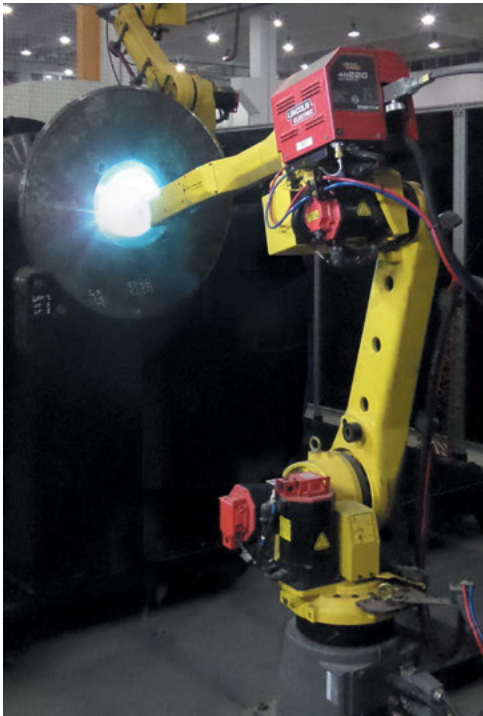


Velan Valve (Suzhou) started production in 2007 in a newly constructed plant in Suzhou, China. This is a wholly owned subsidiary of Velan China Holdings, which in turn is owned 85% by Velan and 15% by Robert Tian, the President of the company. Velan's philosophy has always been to equip all plants around the world with the latest state-of-the-art equipment, including computer numerical control (CNC) machinery and robotic welding, so product quality is maintained. The plant produces y-pattern bonnetless globe valves and cast pressure seal valves for the Chinese power market.

Robert Tian grew up in China and joined Velan in 1995 after graduating from McGill University in Montreal with a Masters in Mechanical Engineering. He started working in Montreal in applications engineering and quotations to learn the product line and then started traveling to China for sales. Today, he is President of Velan China (Suzhou) and President of Encordia Engineering, with sales offices in Shanghai and Beijing. With the combined efforts of Joe Calabrese, Director of Sales - East Asia; Robert Tian and his Encordia sales team for non-nuclear valves; and Michel Monier and his China nuclear sales team, China has become Velan's largest overseas export market.

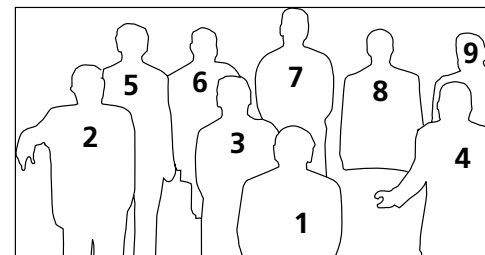
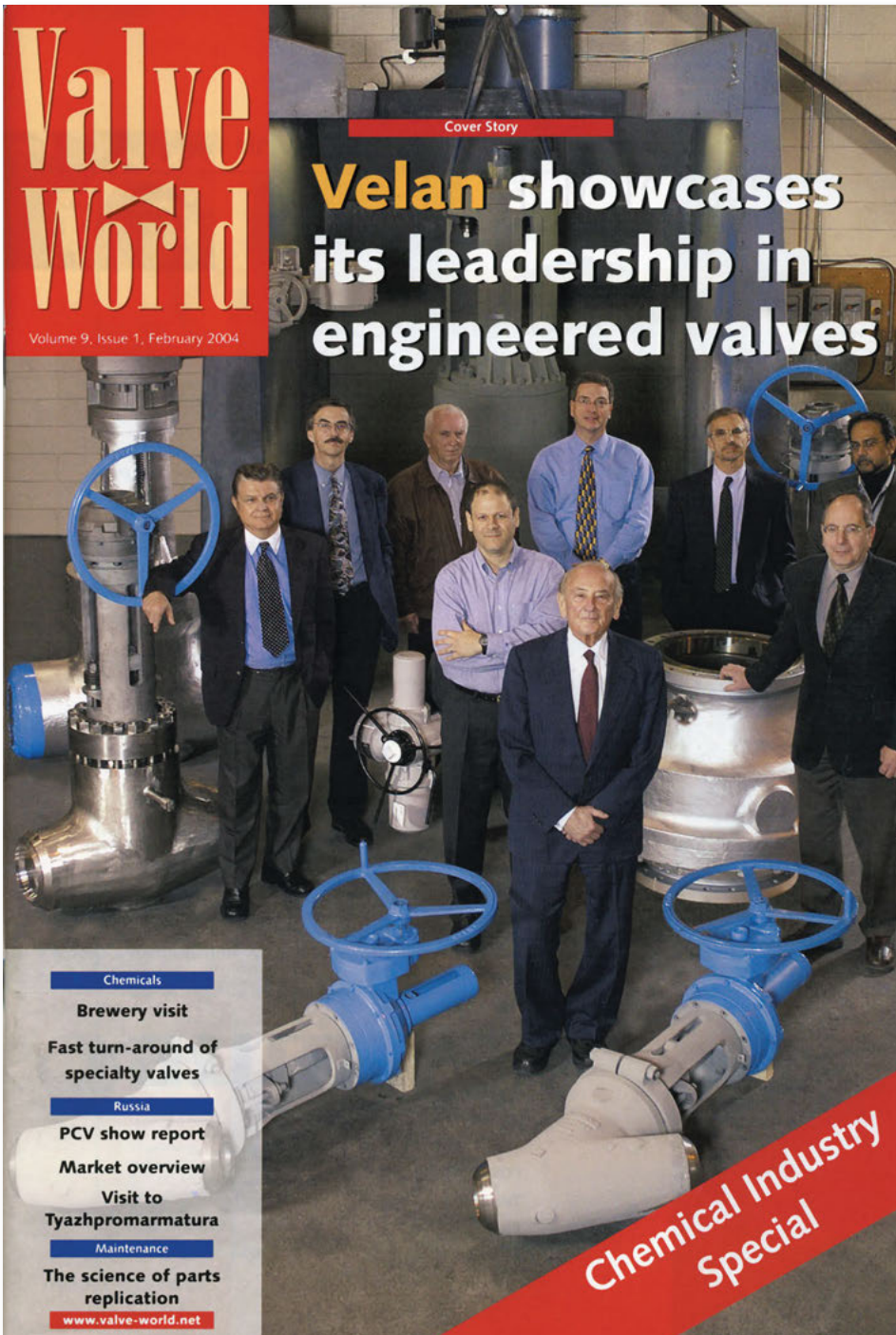


BELOW LEFT: (left to right) are Dominic (Dongming) He, Sales Manager of Chemical and Petrochemical Industry, Encordia; Robert Tian, President, Encordia; Raphael Couturier, Commercial Director, Velan France; Joe Calabrese, Director, Sales - East Asia, Velan Canada; Jia Cailian, Order Administration Manager, Velan Suzhou; Tom Velan, President and CEO, Velan; George (Guoxi) Shen, Plant Manager, Velan Suzhou; Dick (Yaohui) Li, Sales Manager of Power Industry, Encordia; and Alex Lee (Jihong Li), Purchase and Service Manager, Velan Suzhou.



Production in Velan Valve (Suzhou)





Velan was featured in the February 2004 issue of *Valve World* magazine, in an article that focused on its engineered valves for severe service applications. The management team in 2004:

1. A.K. Velan, CEO
2. Mike Zivic, VP, International Sales
3. Gil Perez, VP, Engineering
4. George Zarifah, VP, Global Capital Investment and Production Technology
5. Tom Velan, President
6. Ralph Sargent, VP, International Marketing
7. Steve Farrell, CFO
8. Ivan Velan, Executive VP
9. Rana Bose, VP, Total Process Improvement



A.K. Velan celebrates his 90th birthday with his wife Olga by his side. The event was held at the Mount Royal Club and was attended by Velan executives, Velan board members, and company auditors and lawyers.



February 2011 was a celebration of both A.K.'s 93rd birthday and his milestone 70th wedding anniversary with his wife Olga. Britain's Queen Elizabeth marks the occasion with a congratulatory note (right).





At Juwon Foundry, an argon oxygen decarburization (AOD) furnace smelts CF8M stainless steel for valve castings. The AOD process is used primarily in stainless steel making and other high-grade alloys with oxidizable elements such as chromium and aluminum, where the metal is first melted and then transferred to an AOD vessel where it will be subjected to three steps of refining: decarburization, reduction, and desulphurization.



Workers prepare a sand pattern mold for making cast gate valves.



A worker uses oxygen fuel cutting for a 36" (900 mm) Class 150 gate valve body casting in Velan's Juwon foundry.



LEFT TO RIGHT: Doug Chang, President, Velan Korea and Sejon Trading; Y.S. Lee, VP, Velan Korea; and H.M. Sung, President, Juwon Special Steel.

Doug Chang has worn many hats since Velan started to work with him and Sejon Trading in 1980. Sejon started by representing Velan for purchases of Korean castings and then for sales of Velan valves and parts in Korea. In 1986, Velan incorporated a wholly owned subsidiary in Korea with Doug Chang as President, and began manufacturing valves and parts in a newly built plant that opened in Ansan City in 1988. In 1997, Velan and Sejon teamed up on a 50/50 basis to buy a Korean foundry in Busan. H.M. Sung is in charge of our Korean foundry while Y.S. Lee leads our valve manufacturing plants.

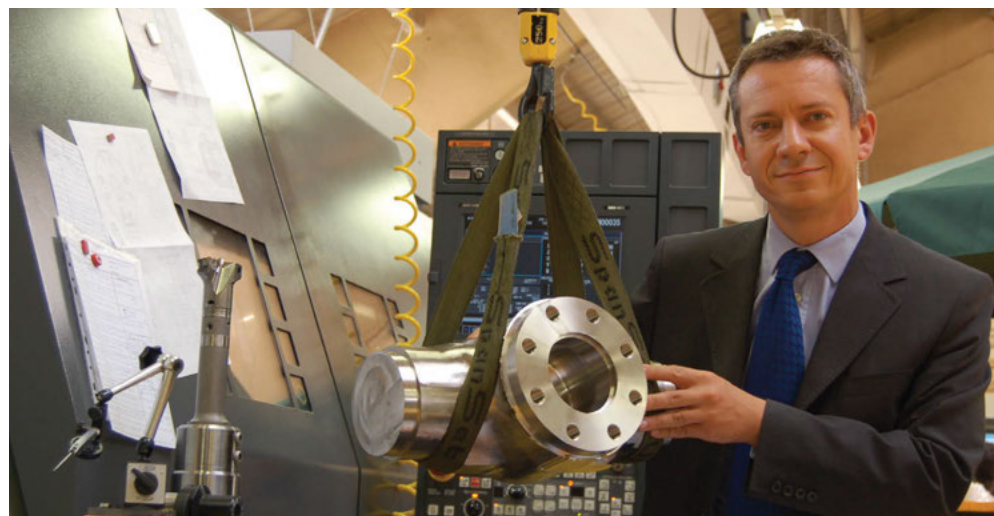
Doug Chang has devoted his career to Velan for more than 30 years. He recently wrote: “Tommy Lasorda once said his blood was Dodger blue. Mine is Velan blue.”



Velan opened its second Korean valve manufacturing plant in 2000 to extend the size range to 2–12” (50–300 mm) gate, globe, and check valves. With the opening of Plant 2, production capacity grew to 80,000 valves a year and subsequent investments increased the capacity to 120,000 valves a year in sizes 2–24” (50–600 mm).



Inspection and assembly of gate valves



In 2000, Velan acquired Alstom's 50% ownership in Velan's joint venture company Alsthom-Velan, in Lyon. The fully owned subsidiary was renamed Velan S.A.S. Starting in the late 90s, the Lyon company started to work on the development of a new generation of valves for third-generation nuclear reactors with the development of severe accident valves and special forged bellows valves for high-pressure environments. All these products were qualified in Velan test laboratories.

In 2005, a nice surprise came from Finland, where AREVA signed a contract for the construction of the very first generation 3 nuclear power plant in the world. Thanks to all the R&D work done in the late 90s and early 2000s, Velan succeeded in winning

significant orders for most of the nuclear classified valves for that plant. Orders followed for EPR reactors in Flammanville, France, and Taishan, China.

In 2007, Velan acquired 75% of Segault, a specialized French manufacturer of small size valves and safety valves for civil nuclear plants and nuclear submarines. Frederic Segault (shown above) kept 25% ownership of the company and continues to manage it. Segault and Velan S.A.S. were competitors until 2006, when they decided to join forces to quote for a new EPR project to increase the chances of success. The bid was successful and led to the acquisition in 2007 after a relatively short negotiation. Both partners have been very happy with the results.

LEFT: EPR RAMA bellows seal globe valve developed in France for the third-generation nuclear power plants. These valves are cobalt free and offer state-of-the-art fugitive emissions control and in-line repair capability.

The Velan relationship with Newport News Shipbuilding and the U.S. Navy goes back to the 1950s. The relationship changed in the 2000s when Velan was chosen by the Lead Design Yards of Northrop Grumman Shipbuilding and Electric Boat to be one of the key valve suppliers to design, develop, and qualify the next generation of high-performance and extended-life propulsion plant valves to be used on the new Gerald Ford Class Nuclear Aircraft Carrier (right).

The valve designs include titanium triple-offset butterfly valves, titanium gate valves, Inconel metal-seated ball valves, and a forged version of the 140 Series SNVY globe valves.

Velan supplied the first shipset of valves for the Gerald Ford and is now producing a second shipset for the John F. Kennedy aircraft carrier.

In 2004, Velan became the supplier of the 140 Series SNVY globe valves to Electric Boat for the Virginia Class Submarine Program.

RIGHT: Qualification testing of a 34" (850 mm) titanium triple-offset butterfly valve in our R&D lab. The valve had no leakage over the 10,000 cycle testing.





ANNEX

PLANT 5

HEAD OFFICE



LEFT: An aerial view of Velan's Head Office and Plant 5. The plant was expanded by the end of the decade and an annex was added.

This is an array of Torqseal® valves in a tank farm manifold. Valves installed in the application must offer zero leakage to prevent cross contamination.



2010s

Building a foundation for the future

New challenges and opportunities continue to emerge in the second decade of the century. Because of globalization, the valve business is more complex than it used to be. The industry has to respond to issues such as international valve standards, export controls, and expanding supply networks. More than ever, the valve industry is also going high-tech.

Throughout its years of operation, Velan has stayed the course, focusing on what it does best: designing and manufacturing industry-leading industrial valves and actuators for a wide range of applications.

LEFT: Top-entry API 6D ball valves are ready for testing at Velan ABV's plant in Lucca, Italy.

RIGHT: Ribbon-cutting ceremony celebrates the expansion of Velan S.A.S.'s plant in Lyon, France. Attendees include upper management from Velan S.A.S.; Jean-Jack Queyranne, Président de la Région Rhône-Alpes (pictured cutting the ribbon); as well as a number of other local dignitaries; and Tom Velan, President, Velan Inc. (on right).



2010

An expansion takes place in France with a \$5.6 million investment in the plant and its equipment

Velan View magazine is launched

2011

ABV S.P.A. is acquired in Italy to form Velan ABV

2011-12

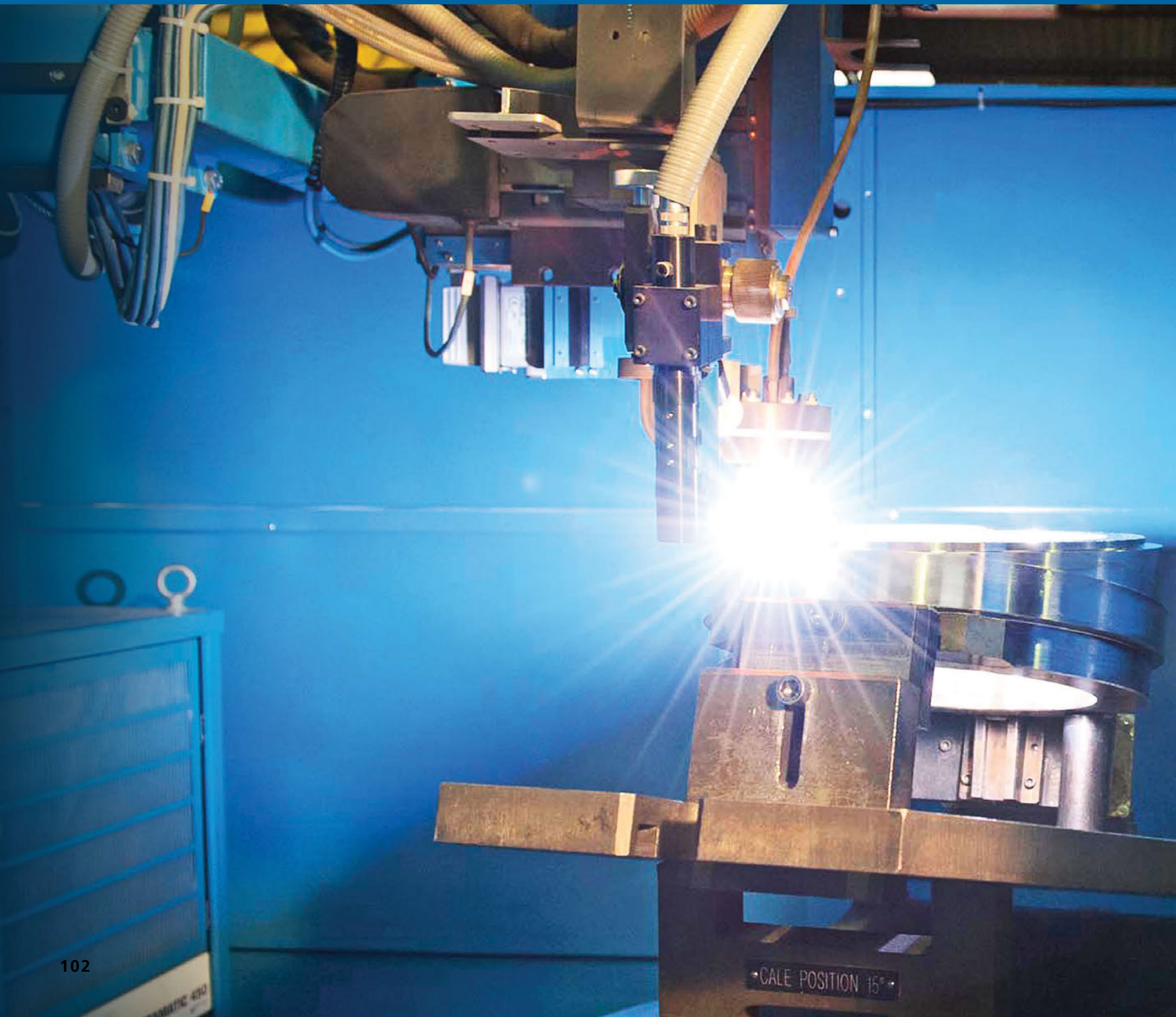
Velan France provides valves for Taishan I and II nuclear plants in China

2012

Velan Valves India is inaugurated

2013

Velan surpasses \$500 million in sales, selling more than 600,000 valves in 64 countries

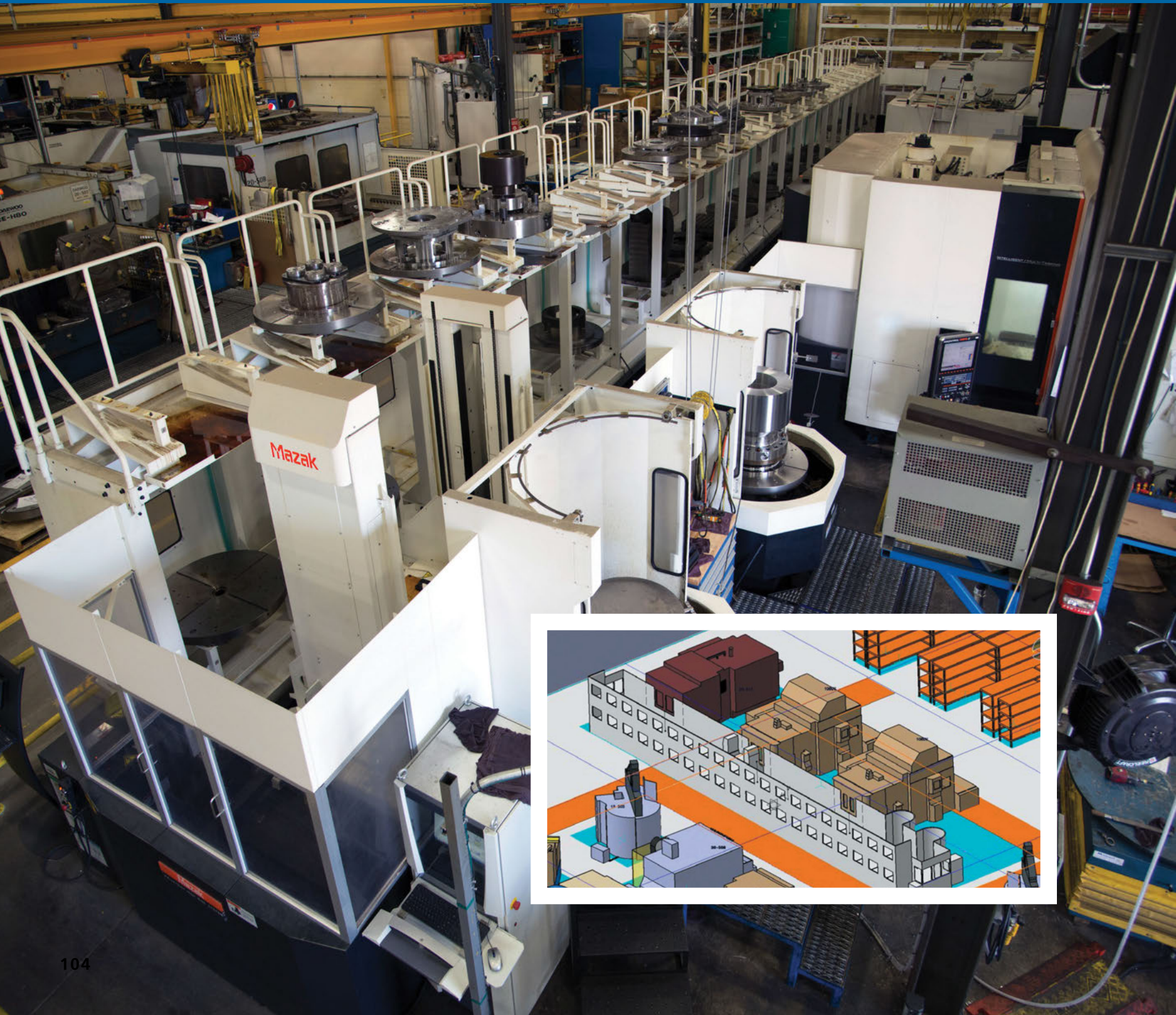


In 2010, Velan opened a \$5.6 million expansion of its plant in Lyon. The plant opening ceremony was attended by many local politicians as well as key customers and suppliers. Several honorary guests spoke, as did Tom Velan and Jean-Claude Cennac, President of Velan S.A.S. The next day was dedicated to the employees and their families. Patrick Henry, General Manager, addressed the 300 visitors and thanked them for the quality of their work and their dedication in achieving the company's objectives.

LEFT: Cobalt-free hardfacing is fused onto a seat.



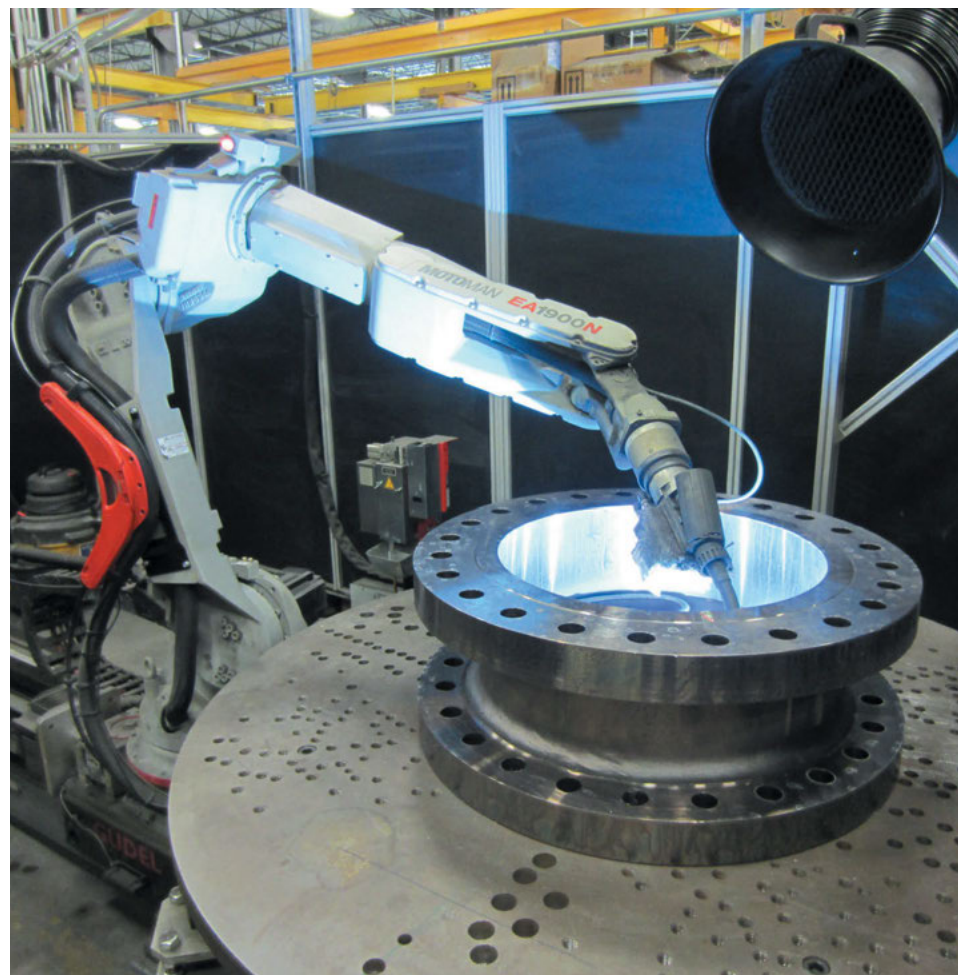
In 2010, Valve World magazine celebrated Velan's 60th anniversary with a cover photo and feature story. Valve World interviewed Dan, Tom, and Ivan Velan for the article.





In 2012 and 2013, Velan invested \$46 million in improving its global manufacturing infrastructure. In a famous quote, Jack Welch of GE said, “Automate, emigrate, or evaporate.” Fortunately, Velan has concentrated on the automation and emigration. On these pages are robotic welding machines and the Mazak flexible manufacturing system (FMS) that has the capability of unattended machining. The FMS system includes several multi-pallet stockers and an automated guided vehicle that transport the pallet from the stockers to three CNC machines. Each machine is equipped with a large tool magazine equipped with the latest state-of-the-art tooling. It also includes tool monitoring and two setup stations for pre-setting, loading, and unloading.

ABOVE: A picture of an automated welding unit in our French plant, where the operator sets the parameters and then views the hardfacing operations on a screen. While automation has not yet achieved the vision portrayed in a 1956 mural in Plant 1, many advances in boosting productivity and reducing the manual component of manual labor have been made. The operator of the automated welding machine can concentrate on viewing the quality of the hardfacing deposit rather than physically trying to make the deposit and maintain consistency.



Robotic hardfacing of a dual-plate wafer check valve seat.

FAR LEFT: Recent improvements to North American production include a new Mazak Palatech FMS integrated with three CNC machines in Plant 5. This equipment translates into increased capacity, reduced setup time, and unattended operation as needed.



In 2003, Velan had created a very successful 50/50 joint venture together with Roberto Bartolena to manufacture API 6D ball valves in Milan, Italy. In five years, it grew from a greenfield startup to a company with sales of \$93 million, an amazing accomplishment. However, since the partners didn't want to continue the 50/50 relationship, Velan decided to sell its share of the company to the Roberto Bartolena Group, while keeping an eye on other opportunities to get back into the market.



In 2011, Velan bought 70% of ABV Energy, an Italian manufacturer of API 6D and API 6A ball valves and other valves for subsea, offshore platforms, FPSO (floating production, storage, and offloading) units, and other upstream markets. The company, located in Lucca, Italy, was owned and managed by the Marianetti family with Luca Marianetti as CEO.

Today, Velan owns 100% of Velan ABV. The CEO of the company is Paolo Ranieri and the Chairman of the Board is Wolfgang Maar, Executive VP, International Sales and Overseas Operations.



TOP LEFT: Velan ABV's Head Office and Plant 1 next to a photo of Velan ABV's Plant 2 assembly and testing facilities.

MIDDLE LEFT: Luca Marianetti (left) with Tom Velan.

BOTTOM LEFT: Wolfgang Maar (left) with Paolo Ranieri (right) next to a shipment of API 6D ball valves.

RIGHT: Joe Calabrese, Velan's Director, Sales - East Asia, with two large Velan 36" (900 mm) Class 900 pressure seal valves for a power plant in China.







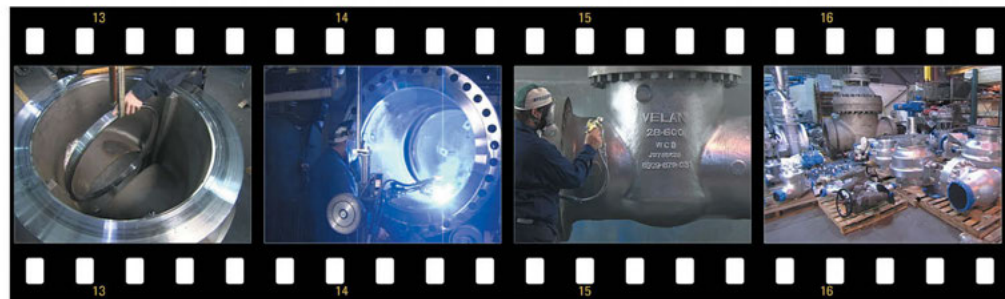
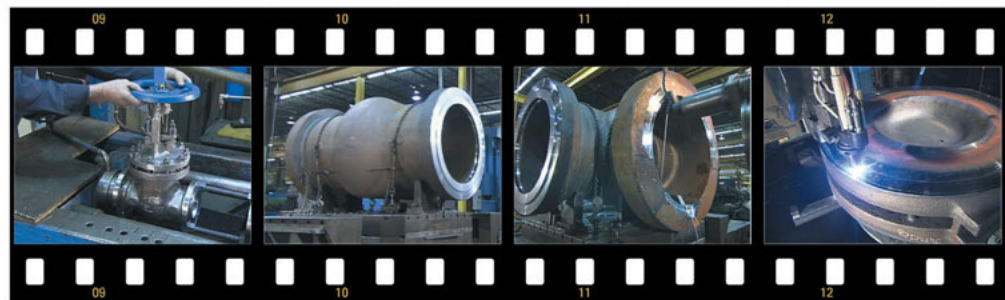
A profile run in the *Valve World* magazine on the company in 2014.

LEFT: This 54" (1350 mm) Class 300 cast gate valve is destined for a polyethylene plant scheduled to open in 2015. It is one of the largest valves Velan has produced to date, measuring over 34' (10.36 m) in height and 7' 6" (2.29 m) in width. It weighs 48,000 lbs (21,772 kg) with its actuator.

Due to its height, the valve had to be assembled outside Plant 2 using a crane and then moved inside for testing and painting. Standing in front of the valve is Stephen Cherlet, Velan's Chief Operations Officer.

TOP RIGHT: Paul Dion, Velan's VP of Sales, Canada, stands in front of a 16" (400 mm) metal-seated ball valve with a 22' (6.71 m) Rotork actuator, the largest actuator built by the company. The valve is ready for shipment to Meridian and is intended for use in a steam-assisted gravity drainage application in northern Alberta, Canada.

RIGHT: In November 2008, Velan valves were featured on an episode of the Discovery Channel's "How It's Made" show, titled "Giant valves."





A Plant 1 Kaizen team developed a new assembly cell for y-pattern bonnetless valves using Lean tools of value-stream mapping and line-balancing charts to design the new cell. The new cell improved productivity, reduced work in progress, and used much less floor space. Similar cells have been developed in other Velan plants.



LEFT: Wyle Laboratory's blowdown test for a Velan 8" (200 mm) Class 900 loop isolation valve. The objective of this high-energy flow test is to qualify a Velan gate valve for simulated severe accident conditions such as loss of coolant accident (LOCA) or a line break in a CANDU nuclear power station. The photograph depicts the high-pressure hot water flashing to steam as it exits the test fixture with a very loud roar.

The qualification test requires the valve to close under the simulated accident flow conditions. The valve was cycled several times with differential pressures up to 1700 psi and temperatures of 550°F (288°C). It successfully closed in under 10 seconds.



Before being shipped to the testing facilities, some members of the Velan team reviewed specifications of the valve and actuator at Velan's Plant 2. When assembled, the Class 600, 18" (450 mm) parallel-slide main steam isolation valve with a gas-hydraulic actuator valve and actuator stood over 12' (3.7 m) high and weighed more than 22,000 lbs (9979 kg).

ABOVE: (from left to right) S. Giridar (Giri), Tom Velan, Jerzy Wolejko, A.K. Velan, Gil Perez, Chuck Doucette, Vahe Najarian, and Andrew Gajgalas.

RIGHT: At the Wyle testing site, a crew of Velan employees were on hand as the valve was put through a series of shaker tests to prove that it could withstand an earthquake of a specified intensity. The shaker table measures roughly 20' by 18' (6.1 by 5.5 m). It took seven days to set up the tests and another four to run them.



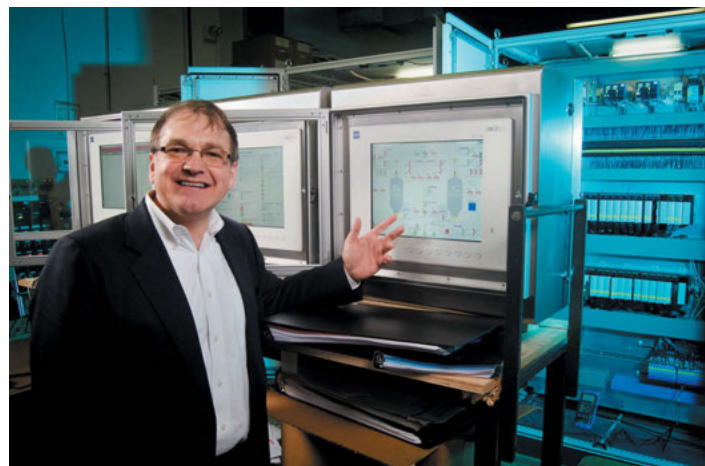


Above: A refinery in India before Velan coker valves were installed to replace the existing competitor's valves. On the left is the same refinery after Velan valves were installed.



LEFT: Hicham Guessous Doss conducts site commissioning of Velan valves with designed PLC and control systems in Jamnagar, India.

BELOW: Brian Simmons, Project Manager, Severe Service Applications, overseeing the factory acceptance test of a PLC-based safety control system for Velan's critical severe service coker isolation valves.





Peter Kindersley, President of Engineered Valves International Inc., invented the delayed coker ball valves and the batch digester capping valves now manufactured by Velan.

Peter is a very creative engineer who has patented many innovative valves during his long career in the valve industry. His relationship with Velan goes back nearly 30 years and by working together Velan is the world-leader in coker ball valves.



Jose del Buey, Velan's VP of Severe Service Applications, in Europe on a delayed coker deck alongside a Velan 14" (350 mm) four-way switch valve. Jose took over sales of coker valves from Peter Kindersley back in 1997 and is now in charge of sales of ball valves for severe services.



Ivan Velan (right) presents a gift to outgoing VMA Chairman Mark Cordell at VMA's 75th Annual Meeting, held at The Breakers in Palm Beach, Florida.



Velan joined VMA in 1979 after qualifying through an audit of the new Williston, Vermont, plant. I took on the role of being Velan's official representative to the VMA and attended meetings for over 30 years. I also served on the Board of Directors from 1995 to 2003 and then again from 2009 to date.

At the VMA's 75th Annual Meeting in 2013, I was honored to become the Chairman and first VMA leader from a Canadian-based company.

In this role, my main priority at VMA is to optimize the many existing programs and help implement an important new initiative to open membership to distributors, who are an integral part of the supply chain for valves. For me, the importance of VMA is that it is a great venue for networking and sharing stories about the valve industry, a voice for the industry to government bodies, and a conduit for timely and topical information through annual meetings, VALVE Magazine, and a range of informative bulletins distributed electronically.

Ivan Velan



In 1981, the first recipient of the annual Velan Foundation Award was Cardinal Paul-Émile Léger for his work with lepers in Africa.

The Velan name has long been synonymous with giving back to the community. The Velan family, the company itself, and the Velan Foundation have contributed to countless philanthropic projects in Canada and overseas. In Montreal, they were involved in setting up the multi-service center La rue des Femmes, which includes a shelter called La Maison Olga (named after A.K. Velan's wife), and



In 2009, Velan raised \$110,000 for Centraide.

in financing a pavilion at Camp Papillon for children with special needs. Since 1981, a Velan Foundation Award has been given annually to an outstanding Canadian for humanitarian activities abroad.

This philanthropic tradition has likewise continued throughout all generations of the Velan family—and amongst Velan employees as well. For example, Velan employees at the Montreal headquarters and other Quebec-based plants hold an annual Centraide/United Way campaign, in which they raise money for this important national charity. Velan in turn matches all employee donations.

In July 2014, Team Velan completed the Enbridge Ride to Conquer Cancer, cycling the 148.5 miles (239 kilometers) from Montreal to Quebec City and raising \$53,815. Team Velan's 17 riders were made up of Velan employees from the Head Office and all four Canadian plants, as well as their families and friends. These funds are used for cancer research and care at the Jewish General Hospital's Segal Cancer Centre and in other healthcare facilities in Quebec.

As Tom Velan, President and CEO of the company, states, "We are fortunate to run a successful business, headquartered in a safe and stable country, and we very much believe in passing our good fortune on to others whenever possible. Regardless of whether we're acting as individuals or as corporate citizens, philanthropy is very much a way of life here at Velan."



Team Velan participated in the 2014 Enbridge Ride to Conquer Cancer.





Michel Monier, Velan's Director of Nuclear Projects, China, is pictured here speaking at the opening ceremony of the China International Nuclear Power Equipment exhibition in Beijing. On the left is a picture of the Velan stand at the exhibition.

In 2006, the Chinese Government set an ambitious nuclear program using the duplication of 1000MW PWRs already in operation. After Velan lost the first unit to a competitor's cast valves, Chinese Engineering, Procurement, Construction (EPC) firms made the decision to select Velan forged technology for all upcoming nuclear projects. From 2006 to 2009, Velan booked valve orders for 20 nuclear power plants in China, including two third-generation EPR's at Taishan, where Velan also booked orders for control valves. These projects helped Velan reinforce its position as the world leader in nuclear valves.



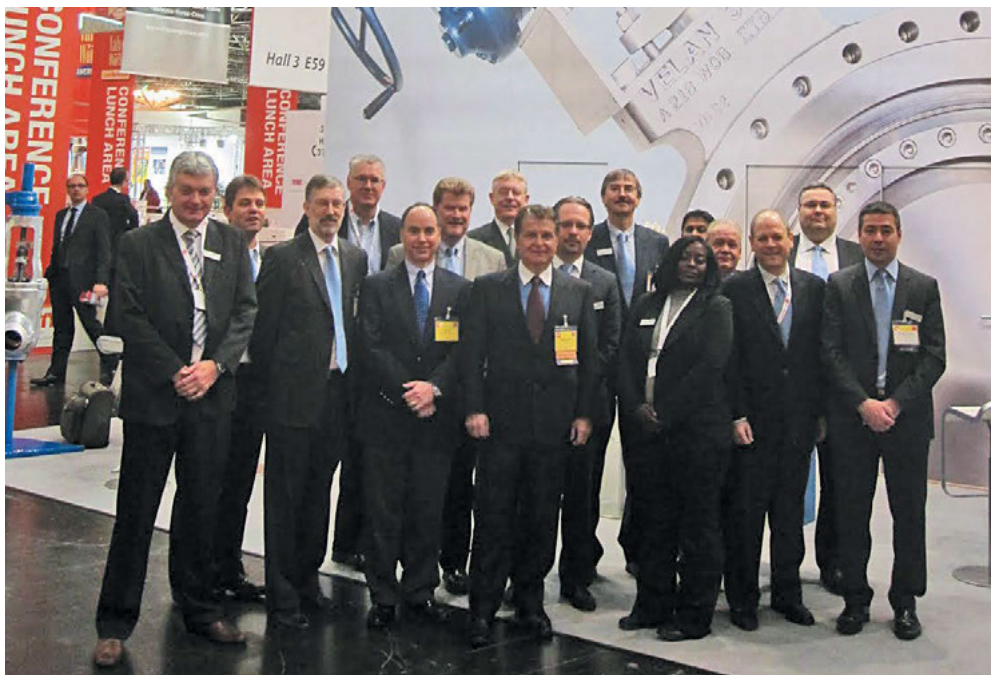
Velan China Nuclear sales office in Beijing. Left to right: Sheng Qing, Deputy Manager, Nuclear Sales, China; Michel Monier, Director, Nuclear Projects, China; Tom Velan, CEO; Robert Tian, President, Velan China; Dick Li, Sales Manager, Power Industry, Encordia.



Over the years, Velan has exhibited at a wide range of tradeshow and other events targeted to its many markets. Today, Velan participates in almost 30 events worldwide every year.

For decades, Velan has been a regular exhibitor at the Global Petroleum Show (GPS), the meeting place for the global oil and gas industry. Since 1968, GPS has been one of the largest energy events that brings together global producers, EPCs, service companies, and suppliers. Held in the heart of the energy capital of Canada—Calgary, Alberta—the event hosts 95 countries, 63,000 attendees, and 2,000 exhibiting companies.

At the June 2014 event, Velan showcased a new booth (top left), equipped with a 90” (229 cm) media panel that displayed a wide range of images of Velan personnel and products, including this closeup of A.K. Velan. The booth also displayed a range of Velan valves, with a 16,000 lb (7257 kg) Velan ABV top-entry ball valve taking center stage.



LEFT: The bi-annual Valve World exhibition is another important event for Velan. Now held in Dusseldorf, Germany, the event is a popular attraction for exhibitors and attendees from around the world. The coordination of Velan’s exhibit is handled mainly by Velan GmbH, our German office, which is run by Stefan Wingerath, President and Managing Director of Velan Germany and U.K. (pictured here eighth from the right, to the left of Tom Velan).



VelTEX held an open house, complete with a celebratory cake, to showcase the brand-new facility.

VelTEX, the newest addition to the Velan distribution center (DC) network, officially opened its doors in November 2013. The DC is located in the industrial hub of the country in Houston, Texas. As the fifth DC to open shop, VelTEX is part of a network of centers that work as a unified source for on-demand valves.

Joseph F. Casey Distributor Award

Year	Country	Company	Recipient
1996	USA	Hawkins Hamilton	Harvey Williams
1996	USA	Zenith Supply	Sheldon Marstine
1997	Canada	Lytle/Dosco (Westburne)	Ed Grimes
1999	USA	Marvel Sales	Robert Townsend
1999	USA	Sunbelt Supply	Larry Feld, Brent Scheps
2001	USA	Ferguson Enterprises	Bill Lynch, Mike Grunkemeyer
2003	Canada	National Oilwell Canada	Scott Hauck
2005	USA	Meridian Specialties	Louis Fradette, Terry Tanguay
2005	USA	Mid-States Supply	Andy Brown
2007	USA	McJunkin Corp.	Dave Rubrecht, John Carte
2007	USA	Red Man Pipe & Supply	Dennis Niver, Greg Peterson
2009	USA	Hawkins Hamilton	David Williams
2009	Canada	Lytle / Westburne / Meridian (Wolseley)	Bryn Murray
2009	USA	Sunbelt Supply	Larry Feld, Brent Scheps
2009	USA	Victory Sourcing	Peter Gerster
2009	USA	Zenith Supply	Sheldon Marstine
2011	USA	Decker Steel and Supply	Tim Nelson
2011	Canada	Matheson Valves and Fittings	Art Matheson

Export Excellence Award

Year	Country	Company	Recipient
2003	Taiwan	Acella industrial	Quince Chen
2005	China	Encordia Engineering	Robert Tian
2007	Brazil	Grupo Feital	Oswaldo Feital
2007	Colombia	Tuvacol S.A.	Carlos Yacaman
2009	India	Givina Consultants	S.Giridhar
2009	Brazil	Grupo Feital	Oswaldo Feital
2009	Singapore	KS Flow Control	Goh Boon Chye
2009	UK	Transmark FcX	Neil Wagstaff
2011	Italy	Technovidue Marketing	Aldo and Alessandro Cogliati

Joe Casey joined Velan in September 1982 as Regional Sales Manager for the U.S. Midwest territory. In 1993, he was promoted to VP U.S. Sales and moved his family to Vermont. The Joe Casey Award was established after his untimely death, and is given to deserving distributors.

Of historical note, Hawkins-Hamilton was one of Velan's first representatives back in the 50s and is the only representative from those days who still represents Velan today. Hawkins-Hamilton is a family company and the relationship with Velan has spanned three generations. David Williams, grandson of founder Harvey Williams, is currently President of the company.

Sunbelt Supply is Velan's single largest distributor. The company was created by Larry Feld and Brent Scheps and became a Velan distributor of the small forged line in 1993, something that Larry considered a foot in the



Distributor Dave Mirless (left) with Velan's Joe Casey (right).

door at the time. Over the years, Sunbelt has become a stocking distributor for the entire Velan product range, with Velan sales to the company surpassing \$50 million in 2012.

Sheldon Marstine's Zenith Supply is Velan's only major stocking distributor to specialize in selling only Velan valves. Zenith used to



In 2009, Tom Velan presented the Export Excellence Award to Neil Wagstaff, Transmark FcX Ltd.



Ivan Velan presented the Joe Casey Award to Brent Scheps and Larry Feld of Sunbelt Supply.

be a frontline distributor but in 1982, decided to become a Velan master distributor stocking a wide range of valves including the most complete pressure seal range.

MRC is the distributor that represents Velan in the most countries around the world. Velan used to work with Vinson, Red Man, Valvax, Joliet Valve, Transmark International, and McJunkin and all these companies are now under the global umbrella of the MRC group. For representatives outside of North America, Velan established the Export Excellence Award and Transmark was one of the recipients.

In Canada, the largest Velan distributor is the Wolseley group whose umbrella covers a long history of Velan Canadian distribution going back to the 70s when Lytle represented Velan from coast to coast. Then through a series of acquisitions, Lytle, Westburne, and Meridian were absorbed into the Wolseley group.



MRC's John Carte (Senior VP-Corporate) is in the driver's seat, while Ivan Velan (from left), Paul Lee (VP U.S. Sales, Eastern Division), and Charlie Pogue (VP U.S. Sales, Western Division) look on and enjoy the ride at the 2011 Distributors Conference in Montebello.



Zenith Supply is a two time-winner of the Joe Casey award. Sheldon Marstine (left) and Ivan Velan in the well-stocked Zenith distribution center.



Hawkins-Hamilton is the only distributor with whom Velan has worked for over 60 years. The company is also one of the very few Velan agents or distributors to win the Joe Casey Award twice.



Velan Valves India Pvt. Ltd., Coimbatore, India



One of the assembly tables for small forged API 602 valves.



On December 3, 2012, inauguration ceremonies were held at the new Velan Valves India Plant, located in the Tamil Nadu province of India.

LEFT: Ramesh Babu, Managing Director, Velan Valves India (far left), and Tom Velan, President and CEO, Velan (right center), watch as the guest of honor, Stewart Beck, Canadian High Commissioner to The Republic of India (left center), cuts the ribbon during the inauguration ceremonies.



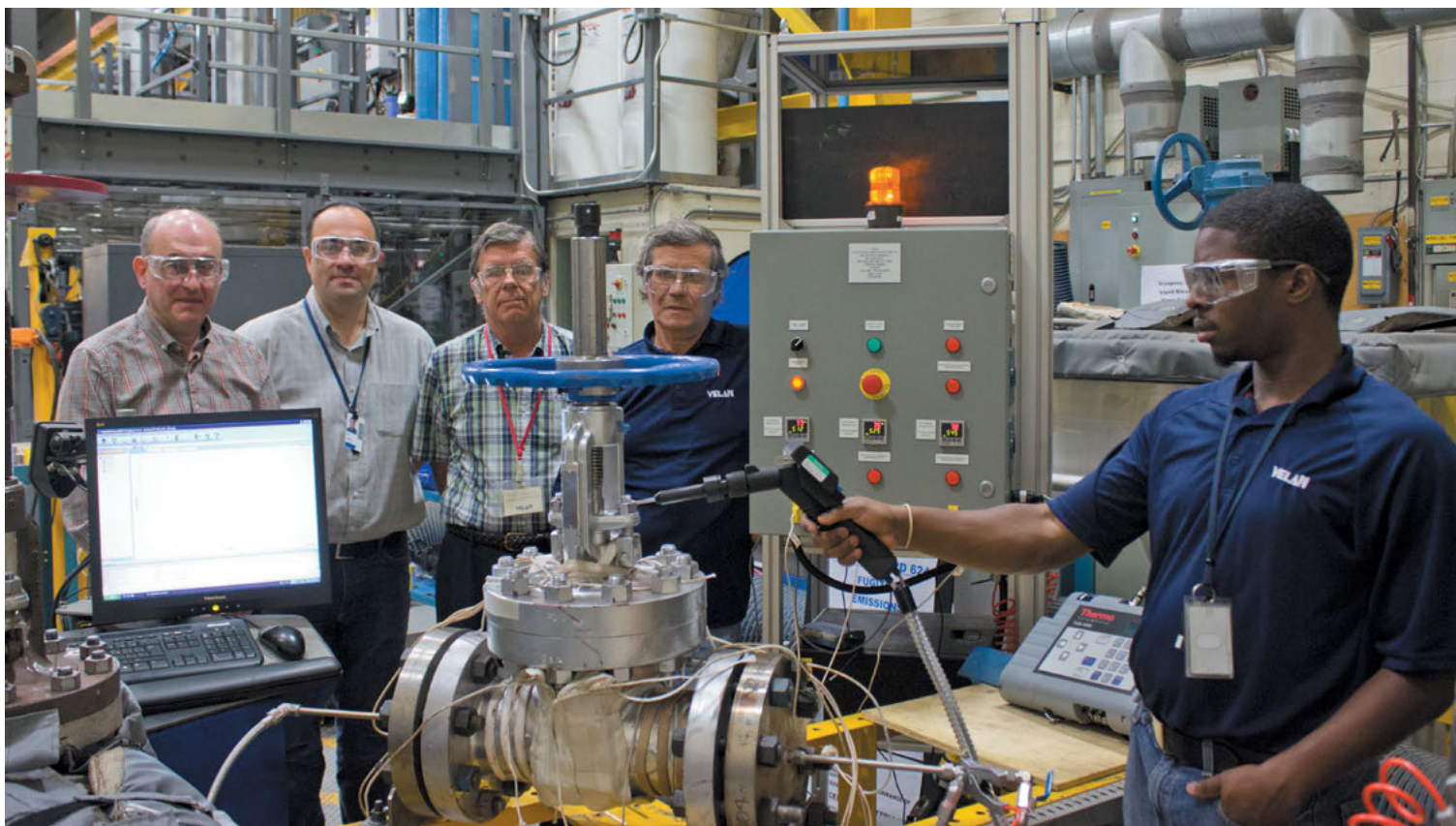
Inauguration ceremonies included this group shot of Velan India employees and guests.



Performance testing of a 24" (600 mm) cast steel gate valve manufactured in India.



Wolfgang Maar (center in the grey suit), Executive VP, International Sales and Overseas Operations, and Ramesh Babu (to Wolfgang's right) gather with the Velan India sales team to discuss sales strategy. Standing fifth from right is S. Giridhar (Giri) who has been heading up Velan sales in India since 1997. Giri built the Indian sales team that is now part of Velan Valves India. The sales team booked more than \$40 million in fiscal year 2014.



API 624 fugitive emissions testing of 4" (100 mm) Class 600 cast steel gate valves witnessed by a third-party inspector from Lloyd's Register. This is the second of about 30 valves that will be tested to qualify the full range of multi-turn valves. These tests complement Velan's existing qualifications for API 622, ISO-15848-1, and TA-Luft, and adhere to standards set by the U.S. Environmental Protection Agency.

ABOVE: (left to right): Christian Beguian, R&D Manager; Vahe Najarian, Corporate Manager, R&D; Bernard Samson, Inspector, Lloyd's Register North America Inc.; Jerzy Wolejko, R&D Technician; and Stéphane Joseph, R&D Jr. Engineer.

Members of the Velan France executive team (right) standing in the Velan S.A.S. manufacturing plant in Lyon, France, next to a 36" (900 mm) top-entry cryogenic butterfly valve ready for shipping to an LNG facility. From left to right: Frédéric Segault, President of Velan S.A.S. and Segault; Jean-Luc Mazel, General Manager, Velan S.A.S.; Tom Velan, President and CEO; Jean-Claude Cennac, Chairman of the Supervisory Board; and Raphael Couturier, Commercial Director.

Jean-Claude Cennac started his work with the company in 1982 as a director nominated by our partner Alstom. He became the General Manager of Alstom-Velan in 1990 and later became President of the company. Jean-Claude led the company through three successful acquisitions. Under his leadership, Velan's French subsidiaries grew from \$39 million to reach sales of \$121 million in fiscal year 2013.





In fall 2010, Velan launches its flagship publication, the *Velan View*. The magazine features stories about products, distributors, employees, and trends in the many industries the company serves. Above are Velan employees from Plant 4 in Granby, Quebec, who were part of a team producing a wide range of valves for a naphtha cracker plant project.



John Tsesselis (right) being presented with his Employee Recognition Award for 50 years of service at Velan by Jack Cotugno, Human Resources Manager (left), and Ivan Velan, Executive VP.

Jack Cotugno himself worked at Velan for 46 years and helped introduce many of Velan's HR initiatives, including the Employee Recognition program. His career included stints both as part of the unionized team in the plant and as a member of Velan's Head Office management team.

RIGHT: Part of the cross-plant team that helped fulfill the order for the Taganito Nickel Mines in the Philippines. The valves are designed for high-pressure acid leach service.



My father came to Canada as an immigrant. From the start, he had a global perspective regarding the market potential for our products; he also wanted to build a multicultural company with its head office in a multicultural city, Montreal. We recently conducted a survey of the origins of our Canadian employees and found they were born in 76 different countries! Our employees come from many different cultures and speak many different languages. In our company, speaking more than two languages is the norm, not the exception. I think we have done a good job in embracing diversity and respecting individuals.

I want to mention two of the many stories of people who helped build this company. Frank Jorgensen was a Norwegian engineer

visiting Canada in 1962. He went to speak to the local Canada Manpower office to say that he was an engineer who didn't speak English or French well but he was looking into job opportunities. The Canada Manpower person told him: "Go see Velan. They hire many immigrants and are always looking for good engineers." Frank Jorgensen was hired and later became Manager of Engineering. He decided to move back to Norway and became Manager of International Sales working out of Oslo. He successfully grew our international sales based on his very technical knowledge of our products.

Another example is John Tsesselis. John started to work in his native Greece as a lathe operator at the age of 12 out of necessity. At age 17, he moved to Canada and soon after

joined Velan as a machine operator, though he spoke little English or French. He took night courses to complete high school and later took university courses. He rose up through the ranks at Velan and has now been General Manager of Plant 1 for 30 years. He is now in his 52nd year working at Velan.

Today we have 2,060 employees working in 11 countries. I am very encouraged by the ability of all our people from very diverse backgrounds, nationalities, and languages to work together towards common goals. I think our people have a very real sense of pride and accomplishment in what we have built together over the last 64 years and I hope this book has conveyed that spirit.

Tom Velan



This last page is dedicated to the person who started it all. A.K. has shown tremendous determination and perseverance throughout his lifetime and even today at 96 years old he wants to come to the office every day. From the early beginnings of the company, whenever people told him something couldn't be done, it just made him more determined to prove them wrong.

Teamwork, listening, and building consensus were never his strong points, but that kind of entrepreneurial single mindedness was crucial in building up the company, especially in the early stages of rapidly expanding the product lines and meeting the challenges of the toughest valve services. He had good ideas for innovative products and the skill to bring them to market, focusing always on the product features and performance.

A.K.'s energy, drive, and passion has inspired many of our employees over the years. It has also made him something of a legend in the valve industry. At the Valve World conference in 2006, when he was 88 years old, he received the first "Valve World Fellow" statue award and a standing ovation for his "years of enthusiastic contribution to the valve industry." A.K. was also mentioned as one of eight inductees into the Wholesaler's PVF Hall of Fame, featuring "manufacturing legends who have facilitated not only the growth of their own businesses, but also the development of visionary new products...."

You may be wondering why the picture we have chosen at left shows the cosmos. It is partly to symbolize his vision for the company, but also because he is very proud of his theory of the origin of the universe and the two books he has written on the subject: "The Multi-Universe Cosmos" and "Birth and History of the Cosmos." I know he would be very disappointed if there was no mention of his books in this pictorial history of Velan.

In this book, we have tried to capture some of the accomplishments and milestones of the last 64 years at Velan. Now we are working hard on the next chapter.

Tom Velan

Cover:

On the cover of this book is the illustration from the original patent that A.K. Velan received for his bimetallic steam trap in 1953. A.K. had studied engineering before the Second World War at the university in Brno, Czechoslovakia, where he saw first-hand the problems they had with leaking steam traps on their model power plant. Years later, after his escape from Communist Czechoslovakia, he invented the Velan Universal steam trap.

A.K. immigrated to Canada in 1949, founded the company Velan Engineering, and started producing the traps in 1950 in Montreal. He soon developed the company's first valve line, high-pressure globe valves that were used as bypasses in the Piping King units. And the rest, as they say, is history.

About Velan:

Today, Velan is a family controlled public company with approximately \$500 million in sales and with senior management that includes three generations of the Velan family. The company has more than 2,000 employees and operates 17 production facilities in 10 countries, multiple distribution centers, and service shops.

The Velan corporate philosophy is to bring to the market new and innovative valve designs, with a special emphasis on quality, safety, ease of operation, simple in-line maintenance, and long service life. All of this, combined with the use of high-quality materials, adherence to the strictest design criteria, advanced manufacturing technology, and automation in all stages of manufacturing, ensures the highest possible quality.

