



# **KAVAL INDUSTRIES LTD. CANADA**

**SOLUTIONS FOR FLOW CONTROL.**



# Introduction of Kaval

- **Rich experience in oil & gas and its related industries**
- **International Team in production and technique support**
- **Well understand valve production and client request**
- **Know-how and know-why about valves**



# Introduction of Kaval

- ❑ Kaval has been providing valve parts and doing OEM for distributors and other companies .
- ❑ Kaval is now providing KAV brand industrial valve.



# Introduction of Kaval

## Products

Products by Kaval covers complete range of valves and valve parts, including:

- ❑ Floating ball valves
- ❑ Trunnion ball valves
- ❑ Gate, Globe and check valves
- ❑ Butterfly valve
- ❑ Pressure seal gate, globe and check valves
- ❑ Valve sealing kits
- ❑ Valve parts



# Introduction of Kaval

## Customers of complete valves

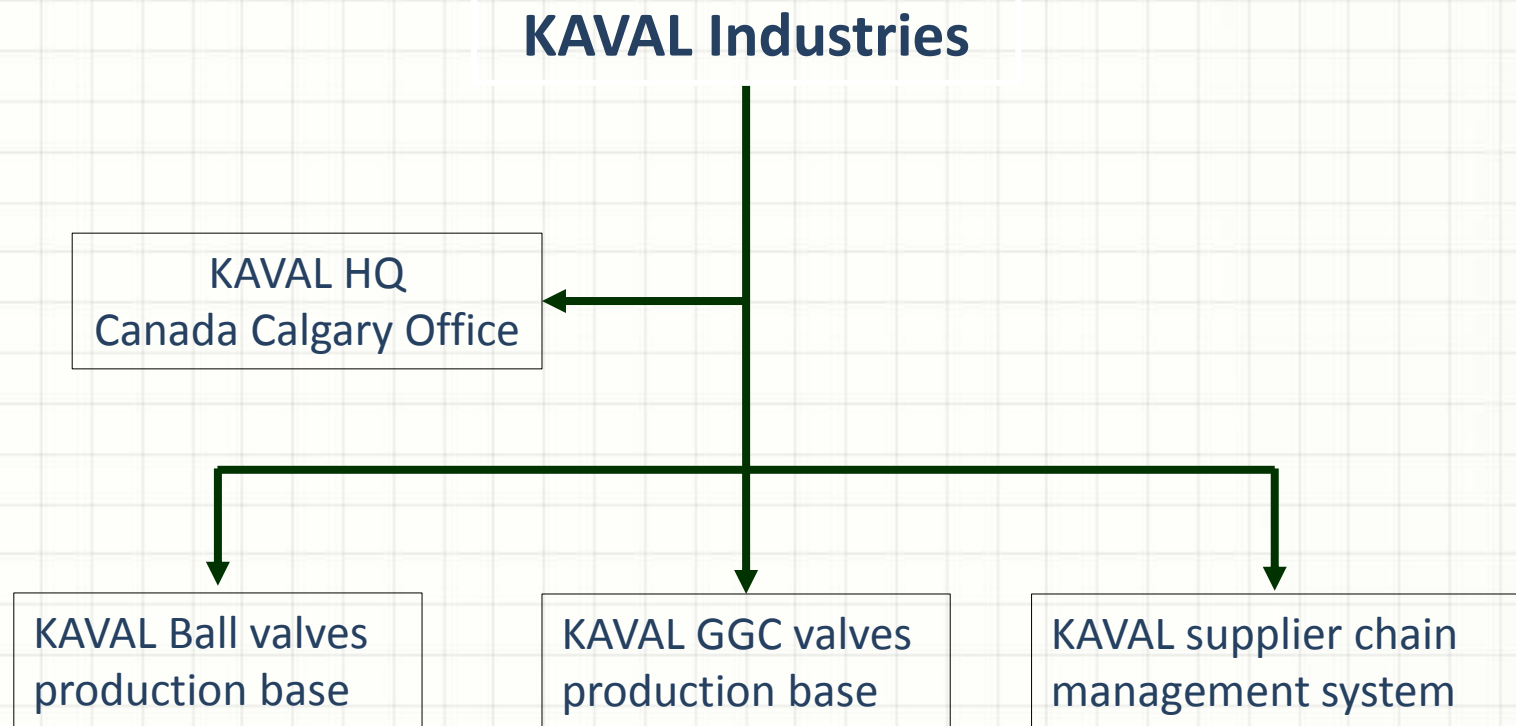
Kaval have been doing OEM for international customers, including:

- Flowserve (US)
- Arflu (Spain)
- Velan (Canada)
- Ringo (Spain)
- Walworth (Mexico)
- ECON (Netherland)
- CAMERON (US)
- BW (Spain)
- Enflow (Canada)
- Crane (US)
- Beric (US)
- ALFA (Germany)
- Valvospain (Spain)



# Introduction of Kaval

## Construction of Kaval





# Our Capacity

- ❑ **Technic team: 23, including:**
  - 4 senior registered P.E. (from Canada)
  - 1 Ph.D (in Material Engineering)
  - 5 Masters Eng. (in Valve design, Mechanical Engineering, etc)
  
- ❑ **Annual Revenue (2015): \$8.7 million, including:**
  - Ball valves: \$ 4.3 million
  - Gate, Globe and check valves (including valve parts): \$ 3.2 million
  - Butterfly valve & Sealing kits: \$1.2 million



# Our Capacity

## Canadian Engineering Team in production and technical support

- ❑ **Casting and raw material control:** controlled by senior P.E. and Ph.D. and in materials and metallurgy of Canada
- ❑ **Valve design:** controlled by senior valve design engineer (M.E. of mechanics and principle engineer in one of the largest valve company)
- ❑ **Quality control:** controlled by senior QC/QA manager with years experience with Canadian valve and oil companies







# What Kaval can do for Client

Depending on client service condition, Kaval can provide clients with professional consultation

- ❑ Material selection
- ❑ Valve type selection
- ❑ Valve and material testing and inspection
- ❑ Valve repair and renovation
- ❑ Information about material sourcing
- ❑ KAVAL Asia supplier evaluation and audit



# How Kaval control quality

- ❑ Complete QA/QC systems in place
- ❑ Raw materials from only qualified suppliers
- ❑ All materials and products pass tests as per codes and client requirements.
- ❑ Whole fabrication process monitoring/following



# How Kaval control quality

- ❑ **Experienced team** (including Ph. D. and Master Eng. in materials engineering, Mechanical engineering, and P.E. from Canada) **controls whole procedure** (from material supply to valve fabrication)
- ❑ **Know-how and know-why, and close communication with clients** (Fully understand what client requires, and guarantee products meet highest quality requirements)



# How Kaval control quality

## Test and Inspection

### NDE (MP. PT. RT, UT):

- ASME B16.34 Sec. 8, ASME Sec. V

### Mechanical tests (tensile, impact, hardness):

- As per ASTM material specifications

### Hydrotest:

- API 598 (GGC valves)
- API 6D (ball valves and pipeline valves)
- CSA Z992 45.15

### Fire proof test (when required):

- API 607

# Main Products List



## Trunnion Ball Valve

- Size: NPS 2" ~ 48"
- Class: ANSI 150 ~ 2500
- Design standard: API 6D / CSA Z245.15
- Flange or BW ends
- Fact to Face: API 6D
- Test: API 6D
- Soft & Metal Seated
- Fireproof per API 607 / API 6FA



Standard: API,BS,ASME,DIN,JIS, metal seated & soft seated.

Material: WCB,LCB, LCC,WC6,WC9,C5,C12,CF8,CF8M,CF3,CF3M,CF8C,CN7M,INCONEL,Duplex,etc

# Main Products List

## Floating Ball Valve (RF)

- Size: NPS 1/2" ~ 6"
- Class: ANSI 150 ~ 600
- Design standard: API 608
- Flange or BW ends
- Fact to Face: ASME B16.10
- Test: API 598
- Soft & Metal Seated
- Fireproof per API 607 / API 6FA



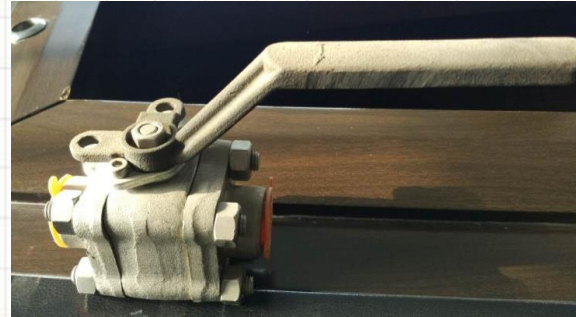
Standard: API,BS,ASME,DIN,JIS, metal seated & soft seated.

Material: WCB,LCB, LCC,WC6,WC9,C5,C12,CF8,CF8M,CF3,CF3M,CF8C,CN7M,INCONEL,Duplex,etc

# Main Products List

## Floating Ball Valve (NPT/SW)

- Size: NPS 1/4" ~ 2",
- Class: ANSI 800-2500
- Design standard: API 608
- Test: API 598
- End: BW, SW, NPT
- Soft & Metal Seated
- Fireproof per API 607/ API 6FA



Standard: API,BS,ASME,DIN,JIS, metal seated & soft seated.

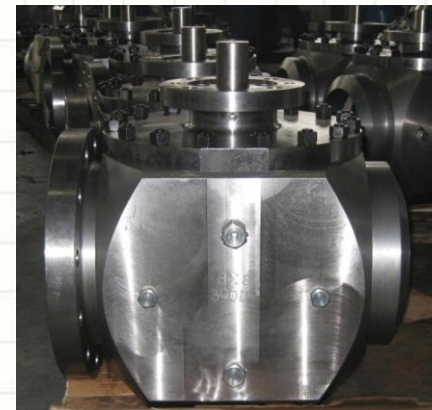
Material: WCB,LCB, LCC,WC6,WC9,C5,C12,CF8,CF8M,CF3,CF3M,CF8C,CN7M,INCONEL,Duplex,etc



# Main Products List

## Top Entry Ball Valves

- Size: NPS 1/2"- 20"
- Class: ANSI 150-2500
- Design standard: API 6D,API 608
- End: RF,RTJ,BW,SW,NPT
- Test: API 6D,API 598
- Soft & Metal Seated
- Fireproof per API 607/ API 6FA



Standard: API,BS,ASME,DIN,JIS, metal seated & soft seated.

Material: WCB,LCB, LCC,WC6,WC9,C5,C12,CF8,CF8M,CF3,CF3M,CF8C,CN7M,INCONEL,Duplex,etc

# Main Products List

## Casting Gate Valve

- Size: NPS 2" ~ 48"
- Class: ANSI 150 ~ 2500
- Design standard: API 600
- Face to Face: ASME B16.10
- Test: API 598
- End: RF, RTJ, BW
- OS&Y, Bolted bonnet, solid, flexible or split wedge. Manually or Actuator operated Shutoff and Repairability Performance



Standard: API,BS,ASME,DIN,JIS, metal seated & soft seated.

Material: WCB,LCB, LCC,WCB6,WCB9,C5,C12,CF8,CF8M,CF3,CF3M,CF8C,CN7M,INCONEL,Duplex,etc

# Main Products List

## API 603 Gate Valve

- Size: NPS 2" - 24"
- Class: ANSI 150 - 300
- Design standard: API 603
- Face to Face: ASME B16.10
- Test: API 598
- End: RF, BW
- OS & Y
- Solid, flexible or split wedge
- Manually or Actuator Operated



Standard: API,BS,ASME,DIN,JIS, metal seated & soft seated.

Material: WCB,LCB, LCC,WC6,WC9,C5,C12,CF8,CF8M,CF3,CF3M,CF8C,CN7M,INCONEL,Duplex,etc

# Main Products List

## Forged Gate Valve

- Size: NPS 1/4" ~ 2"
- Class: ANSI 150 ~ 2500
- Design standard: API 602
- Test: API 598
- End: RF, RTJ, BW, SW, NPT
- OS& Y, Solid wedge



Standard: API, BS, ASME, DIN, JIS, metal seated & soft seated.

Material: WCB, LCB, LCC, WC6, WC9, C5, C12, CF8, CF8M, CF3, CF3M, CF8C, CN7M, INCONEL, Duplex, etc

# Main Products List

## Swing Check Valve

- Size: NPS 1/2" ~ 48",
- Class: ANSI 150 ~ 2500
- Design Standard: BS1868
- End: RF, RTJ, BW, SW, NPT
- Non-penetrated disc shaft



Standard: API,BS,ASME,DIN,JIS, metal seated & soft seated.

Material: WCB,LCB, LCC,WCB6,WCB9,C5,C12,CF8,CF8M,CF3,CF3M,CF8C,CN7M,INCONEL,Duplex,etc

# Main Products List

## Forged Check Valve(Swing/Lift)

- Design standard: API 602, BS5352
- Size: NPS 1/2" ~ 2"
- Class: ANSI 150 ~ 2500
- Test: API 598
- End: RF, RTJ, BW, SW, NPT



Standard: API,BS,ASME,DIN,JIS, metal seated & soft seated.

Material: WCB,LCB, LCC,WC6,WC9,C5,C12,CF8,CF8M,CF3,CF3M,CF8C,CN7M,INCONEL,Duplex,etc

# Main Products List

## Cast Globe Valve

- Size: NPS 2" ~ 16"
- Class: ANSI 150 ~ 1500
- Design Standard: BS1873
- Test: API 598
- Face to Face: ASME B16.10
- End: RF, RTJ, BW
- OS&Y,
- Manually or Actuator Operated
- Tapered Disc



Standard: API,BS,ASME,DIN,JIS, metal seated & soft seated.

Material: WCB,LCB, LCC,WC6,WC9,C5,C12,CF8,CF8M,CF3,CF3M,CF8C,CN7M,INCONEL,Duplex,etc

# Main Products List

## Forged Globe Valve

- Size: NPS 1/4" ~ 2"
- Class: ANSI 150 ~ 2500
- Design standard: API 602
- Test: API 598
- End: RF, BW, SW, NPT
- OS&Y
- Tapered Disc
- Manually Operated



Standard: API,BS,ASME,DIN,JIS, metal seated & soft seated.

Material: WCB,LCB, LCC,WC6,WC9,C5,C12,CF8,CF8M,CF3,CF3M,CF8C,CN7M,INCONEL,Duplex,etc



# Main Products List

## Dual Plate Check Valve

- Size: NPS 2" ~ 30"
- Class: ANSI 150 ~ 1500
- Design standard: API 594
- Type: Wafer, Lug, Flanged, Butt Weld, Hub Connections
- Improved flow efficiencies



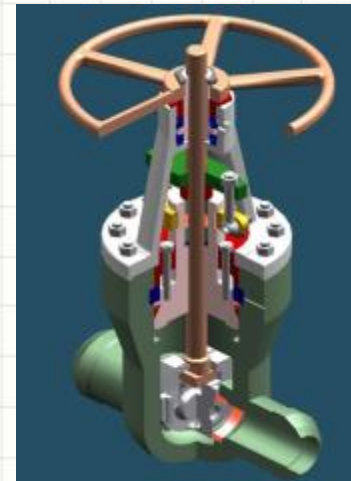
Standard: API,BS,ASME,DIN,JIS, metal seated & soft seated.

Material: WCB,LCB, LCC,WC6,WC9,C5,C12,CF8,CF8M,CF3,CF3M,CF8C,CN7M,INCONEL,Duplex,etc

# Main Products List

## Pressure Seal Gate\Globe\Check Valve

- Size: NPS 1/2 ~ 24"
- Class: ANSI 600 ~ 2500
- Design standard: MSS SP144
- Test: API 598
- End: BW, SW,RF, RTJ



Standard: API,BS,ASME,DIN,JIS, metal seated & soft seated.

Material: WCB,LCB, LCC,WC6,WC9,C5,C12,CF8,CF8M,CF3,CF3M,CF8C,CN7M,INCONEL,Duplex,etc

# Main Products List

## Butterfly Valve

- Size: NPS 2" - 48"
- Class: ANSI 150 - 600
- Design standard: API 609
- Face to Face: API 609
- Test: API 598
- End: Wafer, Lug, Flanged, BW
- Metal seat/Soft seat
- Manually or Actuator Operated



Standard: API,BS,ASME,DIN,JIS, metal seated & soft seated.

Material: WCB,LCB, LCC,WC6,WC9,C5,C12,CF8,CF8M,CF3,CF3M,CF8C,CN7M,INCONEL,Duplex,etc

# Main Products List

## Strainer

- Size: NPS 1/2" - 20"
- Class: ANSI 150 - 1500
- Design standard: B16.34
- Face to Face: B16.10
- Test: API 598
- End: Flanged, SW, NPT
- Y Type, Basket Type



Standard: API, BS, ASME, DIN, JIS, metal seated & soft seated.

Material: WCB, LCB, LCC, WC6, WC9, C5, C12, CF8, CF8M, CF3, CF3M, CF8C, CN7M, INCONEL, Duplex, etc

# Main Equipment :



**Six-axis Floor Type Boring & Milling Machine**



**3.5m Vertical machining Center**

# Main Equipment :



Surface Grinding Machine (For valve size up to 24")



MCH80 CNC

# Main Equipment :



**Automatic welder for full weld ball valve**



**Horizontal machining center**

# Main Equipment :



Valve testing bench



# Main Equipment :



Valve painting line

# Main Equipment :



3D- coordinate measuring machine

# Quality testing instrument :



Surface roughness testing instrument

# Quality testing instrument :



Paint thickness gauge

# Quality testing instrument :



Spectrum analyzer



Handheld Spectrograph

# Quality testing instrument :



Hardness tester

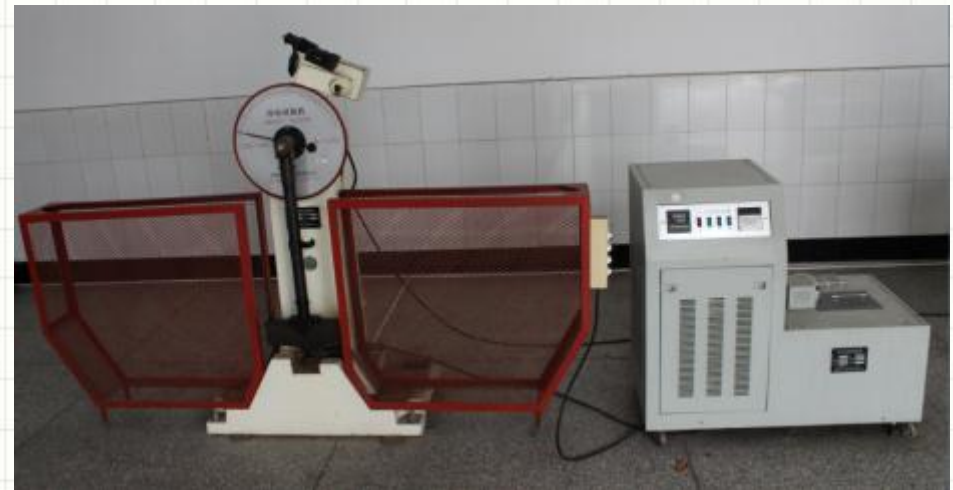


High pressure air tester

# Quality testing instrument :



Magnetic particle testing machine



Impact testing machine

# Quality testing instrument :



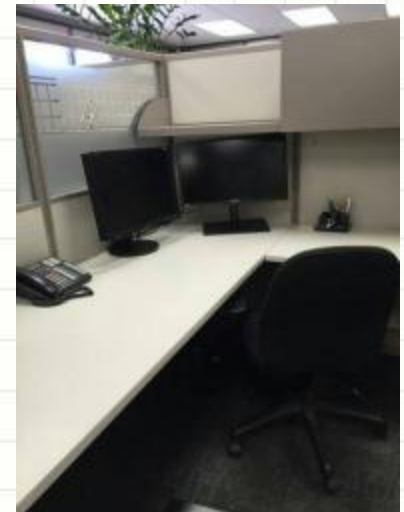
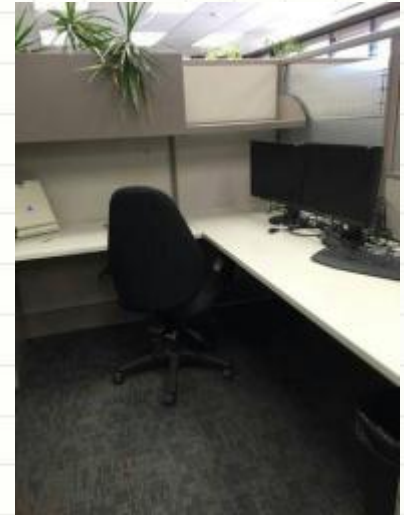
**Ultrasonic tester**



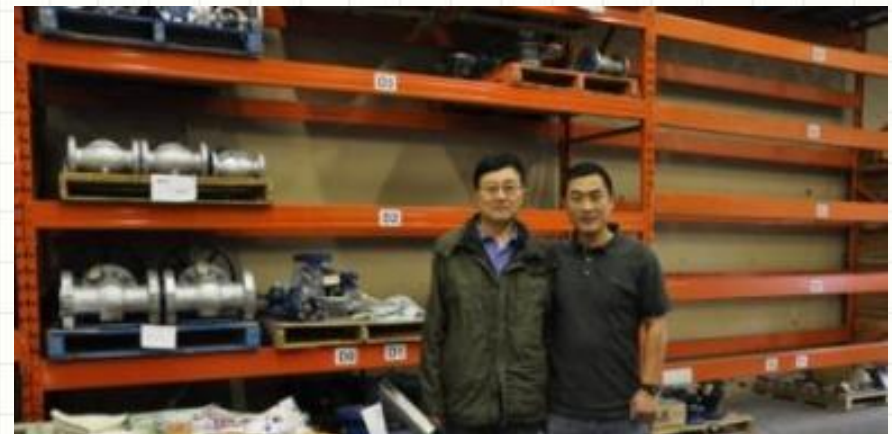
**Universal testing machine**



# Plant Gallery: Kaval Canada office



# Plant Gallery: Kaval Canada workshop & stock



# Plant Gallery:

## Kaval Canada workshop & stock



# Plant Gallery: Kaval China workshop



# Plant Gallery: Kaval China workshop



# Plant Gallery: Kaval China workshop



# Plant Gallery: Kaval China workshop



# Plant Gallery:

## Warehouse





# Plant Gallery:

## Warehouse














# Plant Gallery:

## Warehouse



# Ref. Projects EPC / End user:

	Country	The end user	Application
	Canada	Grizzly oil sands	oil & Gas
	Canada	Mosaic	chemical
	Canada	Plains midstream	oil & Gas
	Canada	Bricliff Energy Ltd	oil & Gas
	Canada	Pembina	oil & Gas
	Canada	nexen	oil & Gas
	Canada	Petro-Tech Heater	oil & Gas
	Canada	NWT POWER CORPORATION	oil & Gas
	Canada	Crescent point Energy	oil & Gas
	Canada	Cargill LTD	Food manufacturing company
	Chile	AES Gener	Power
	Chile	Anglo American	Mining
	Chile	MolyMet	Mining & Chemical
	Malaysia	Chemical Company of Malaysia Berhad	Chemical
	Vietnam	Premier Oil Vietnam Offshore B.V.	Oil & Gas
	Philippines	Philippine Associated Smelting and Refining Corporation	Refinery
	Philippines	Holcim Philippines Inc	Mining/ Cement
	Iran	Pars Oil and Gas Company	Oil & Gas



# Advantages of buying from Kaval

- High quality products and services
- Outstanding technical support
- Attractive price & low life cycle cost
- Fast delivery schedule
- Offices in Calgary – to get prompt response and quick solutions for your request.



# Advantages of buying from Kaval

- Specialty team to provide service
- Prompt response and smooth communication
- Competitive price
- Competitive terms
- Make sure quality products



# Kaval guarantees:

- ✓ Best service (response, documents, ...)
- ✓ Best quality meet your application
- ✓ Best technic support
- ✓ Competitive price



**Give us the opportunity and we  
guarantee your best results**

**Thank you**