



INTRICAST

INVESTMENT CASTING | SAND CASTING | MACHINING

OUR WORK IS OUR
IDENTITY



POURING VALVE & PUMP CASTING
SINCE 30 YEARS & STILL CONTINUING



INTRICAST PVT. LTD. an Investment Casting foundry was established in year 1988. To meet the increasing demand of Investment castings and to satisfy the need of bigger size castings, INTRICAST had added three more manufacturing location under the name of **intolcast pvt. ltd.** (an Investment casting foundry, year 1994), **GUJARAT INTRUX LIMITED** (a sand castings foundry, year 1998) and **INTRUCAST LTD.** (an Investment castings foundry, year 2012) to produce Vacuum and Air melt Investment castings for Valves - Pumps - Turbine Wheel - Orthopaedic Implants). Comprising all four locations, total built up area spread over to 29591 mt² (plot area 85692 mt²) and yearly manufacturing capacity is 8000 tonnes. Out of yearly (year 2017-2018) produced 3816 tonnes, 90% of production (3434 tonnes) are shipped to Valve & Pumps companies which consists of all Ferrous alloys, Low & High alloys, Steel & Stainless Steel, Duplex Steel & all air melt Nickel and Nickel alloys including some selected Non Ferrous grade like Brass and Aluminium Bronze. The weight handled in Investment Castings is from few grams to 110 kg and in Sand castings from 20 kg to 1800 kg.

The financial strength as appraised by D & B:
Performance & Credit Rating is SE 2A (HIGH)

In our quest to be close to the customer, INTRICAST has created global sales linkage by bringing together a seasoned team of casting specialists from all over the world, foundry having it's global sales network in Europe, U.K., U.S.A & in India. 65% of production are being exported to various parts of world viz Germany, Israel, Spain, The Netherlands, Sweden, Hungary, UK, USA, Mexico, Italy, France, Austria, Denmark and Portugal. To test and certify in accordance to standard, foundry is having state of art testing facilities including Radiography Source IR-192 & Co-60 isotopes. Approvals we have are for ISO 9001-2015, AD 2000- Merkblatt W0, PED acc to directive 2014/68/EU, Lloyd's, DNV-GL, Bureau Veritas, KRS, IBR, ABS & EIL. Apart of this, foundry having an approval for manufacturing of castings for world renowned refineries and certification bodies like NORSOK.

30 GLORIOUS YEARS IN THE ART OF CASTING



INVESTMENT CASTING & It's SCALE

At INTRICAST, we manufacture Investment Castings weight of single piece casting 40 Kg. ideally (having facility & technical capabilities to cast up to 120 Kg). We are equipped with 47 nos. of high tech wax injection presses, state of art shelling area having environment control with respect to temperature, humidity and 3 nos. of autoclave for de-waxing.

Our Melting and Heat treatment shops are equipped with: Four 250 kW and One 550 kW medium frequency induction furnace with varying crucible of 50 kg (1 nos), 150 kg (2 nos), 250 kg (9 nos.), 750 kgs (1 nos) and one medium frequency Vacuum melting for type VIM-IC 1 E-BP, Equiaxed Bottom Pour, designed for turbine wheels and orthopaedic implants. Our Heat treatment shop is equipped with two electrically heated, Batch type, size: W 1500mm x D 1200mm x H 750mm, one PNG fired batch type (maximum temperature attained is 1250 Degree Centigrade) having loading capacity of 1000 kgs and two Electrically heated, Batch type having loading capacity of 250 kgs. All Heat treatment furnaces are monitored by SCADA base software for real trends of different zone for individual furnace.

Entire operations are running with ORACLE base customized foundry software, which is unique for our process. 90% of production capacity is utilizing for manufacturing of Valves & Pumps castings viz 3 pc, 2 pc & Single pc ball valve, Top entry ball valve, Plug, Diaphragm, Swing check, Safety relief, Dual plate check valve, Trunnion mounted ball valve (TMBV), Soft seated, Knife gate, Pneumatic, Steam trap, Butterfly, Non Return, Gate, Globe valve, Pressure transmitter, Transducer, Actuator, Slurry pumps, Dairy pumps, Chemical handling pump, Submersible pumps, Screw pump, Diaphragm pump & castings for sea water handling and used in RO process etc. Whereas 10% of productions is utilizing for general engineering, orthopaedic implants and turbine wheels.

Composition we cast are Ferrous alloys, low & high alloys, steel, stainless steel including duplex steel, all air melt Nickel, Nickel alloys and selected Non Ferrous alloys and selected Nickel base vacuum melting alloys.





SAND CASTING & It's SCALE

At INTRICAST we manufacture Sand casting single piece weight of 1800 Kg which is approximately 36" class 150 Ball Valve Body. Our melting shop is equipped with two medium frequency Induction Furnaces of 450 kW & 1000 kW, with varying crucible of 350 Kg, 750 Kg, 1500 Kg & 3000 Kg. To support the need of small Qty requirement in high alloys or in Nickel alloys we have specifically installed a small crucible of 100 Kg.

Heat treatment furnace we have is gas fired, Batch type, Size: W: 1500MM X D: 2000MM X H: 1200MM, having loading capacity of 3000 Kg. It is monitored by UNISCAN software to know the real trends of temperature in different zones. The heat treatment furnace is surveyed as per ASTM A991, API-6A Annexure M. Our moulding shop is equipped with Semi mechanized loop line suitable for small weight - high qty & hand moulding for bigger sizes. We have state of art machining facility equipped with CNC, VMC & HMC. ASTM A991, API-6A, Annexure-M

Through AIR & VACUUM melt Investment casting & AIR melt Sand casting SOME OF ASTM, DIN, BS & proprietary alloys poured are:

DIN 1.4107, 1.4408, 1.4306, 1.4308, 1.4462, 1.4837, 2.4686, 1.4581, 1.4309, 1.4552, 1.4409, 1.4584, 1.4828, 1.4825, 1.4313, 1.4470, 1.4435, 1.4517, 1.7357, 1.4512, 1.4511, 1.4086.

WCB, WC6, WC9, CA15, CA40, HE, HH, CF8, CF8M, CF3, CF3M, CN7M, CD4MCu, CG8M, CK20, Ch20, CK3MCuN, M35-1, M25-S, CW12MW, N-12MV, N7M, CY-40, CW-6M, CW-6MC, Cu5MCu, C2100, 50Ni-50Cr-Cb, CB7Cu-1 (17-4PH), CD3MN (Duplex 4A), CE3MN (Duplex 5A), CD3MWCuN (Duplex 6A), CD4MCuN, HK, CA6NM, M-30C, Cobalt alloys 6 & 12, CW-2M, CX-2MW, CD3MCuN, CD3MWCuN, B148 C95800 (AB2) and SB-62 (UNS C-83600) Bronze, F75 CoCr Alloy (for orthopaedic implants through vacuum melting), Inconel 713C (proprietary alloys through vacuum melting for turbine wheels)





List Of Testing Equipments

- Three nos of Spectrophotometers-
One is: SPECTRALAB MB direct reading optical emission, Spectro Germany, three base Fe-Ni-Co, 24 elements (C, Mn, Si, S, P, Cr, Ni, Mo, Cu, Nb, Ti, V, W, N, Pb, Co, Se, Al, Mg, B, Zr, Fe, Bi, Sn).
Second one is: SPECTROMAXx direct reading optical emission spectrometer- Spectro Germany, two base Fe-Ni, 24 elements
Third one is: SPECTROMAXx direct reading optical emission spectrometer- Spectro Germany, Four base Fe-Cu-Ni-Co, 30 elements
- Chemical (Wet) analysis laboratory
- P.M.I- XL2 800 Alloy Analyzer (Make: Thermo Niton USA)
- Ferrito Scope FMP30 (Make: Fischer)
- Mechanical Testing Laboratory: Ys, Ts, % of elongation, reduction of area, bend test and Impact test @ room temp to -196°C)
- Hardness Testing: Brinell as well Rockwell Hardness tester (optical with 3000 kg load).
- Metallographic Laboratory equipped with:
Trinocular Inverted Metallurgical Microscope-50X-1000X- Carl Zeiss Make and Stereozoom Microscope 8X-45X Dewinter Make.
- Inter Granular Corrosion Test (IGCT) facility for practice A, B, E as per ASTM A262 and corrosion test as per ASTM G48 method A.
- Dye (Liquid) penetrant test facilities - ASNT Level II
- Magnetic Particle testing equipment for Dry and Wet (fluorescent) ASNT Level II.
- Radiography: Source-IR-192 & Co-60 isotopes.- ASNT Level II
- Ultrasonic testing- ASNT Level I
- 3-D Coordinate Measuring machine "Spectra" (CMM)
- RAD CHECK METER With External Detector, Type no. RC705B, Range Covered 0-10,000 $\mu\text{R/hr}$
- Flexoscope: effective length 570mm X Outer diameter 4.2mm, viewing angle: 0 Degree, Field of vision: 100 Degree
- Design, Simulation and Image Analysis Software:
CREO Parametric version 2.0 | NX Version 8.5 | AUTO CAD LT Version 8.5 | Softcast for simulation | Dewinter Image Analysis Software 4.5



Approved castings suppliers for various projects:

Following end customers, through our various customers had visited and conducted a evaluation survey of our foundry and have given approval to our customer for use of castings supplied by our foundry.

INVESTMENT CASTINGS	SAND CASTINGS
INTRICAST – INTOLCAST – INVAC CAST	GUJARAT INTRUX LIMITED
NORSOK M650- Edition 5 for Grade 4A &6A	
Saudi Aramco, Chevron, TOTAL-FINA-ELF, Exxon Mobil	
National Petroleum Construction Co. (NPCC) -Abu Dhabi WO MED000577-WO MED00586	
Petrofac International- WO MED00567	
BASF	Chiyoda Corporation Limited -Japan

Why INTRICAST will be your source for Valve & Pump Castings?

- Through a span of 30 Years with the continuous & continual improvement, dedicated & highly focused vision in the field of foundry especially for catering castings need for Pumps & Valves industry. Out of yearly produced 3816 tonnes, 90% of productions, 3434 tonnes are cast for Valve & Pump companies. Capability to cast single piece Investment castings weight from few grams to 120 Kg. & Sand castings from few Kg to 1800 Kg.
- LESS REJECTION – TIMELY DELIVERY – COMPETITIVE PRICE.
- Pouring around 134 various Alloys.
- Small batch production runs: We have range of melting crucibles which allows us to run small batch productions.
- **Modern tool making facility:**
To implement the exact thought of your design engineer, we have modern tool (for Investment Castings) and pattern (for Sand Castings) making facility which includes Vertical Machining Centre (VMC), Milling Machine, Electro Discharge Machine, Conventional Lathe Machine, Conventional Drill Machine with use of varying of latest software.
- **Modern Measuring facility:**
We have at INTRICAST, a 3-D Coordinate measuring M/c "Spectra" (CMM).
- **Single Vendor Sourcing Advantages (SVSA):**
Apart from Investment castings, INTRICAST have their Sand casting facilities under name of Gujarat Intrux Limited having capacity to produce annually 3000 MT of alloys and Super alloys castings. Shipment together for Investment and Sand castings in one single container is the fast and cost effective logistics solution.





STATE OF ART MACHINING FACILITY EQUIPPED WITH:

MACHINE

35 nos. of CNC Turning centre

8 nos. of VMC

11 nos. of HMC

MACHINE DETAIL

Chuck size 160, 210, 300 and 450mm

XYZ Travelling is 600mm x 150mm x 320mm (5nos.), 762mm x 406mm x 500mm, 810mm x 510mm x 510mm, 1270mm x 508mm x 635mm

Table size 400mm



Awards & Approvals:

Consecutively since last 17years (from year 1996 to 2016) we are awarded for Export Excellence & Highest exporters trophy in recognition of achieving highest export performance in western region by Engineering Export Promotion Council (EEPC, a independent Government Body).

APPROVALS WE HAVE ARE FOR

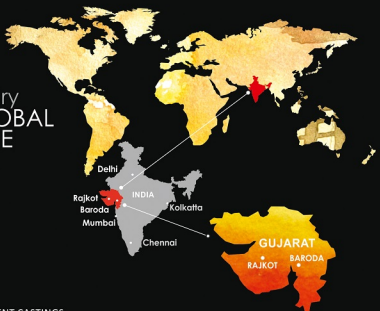


DNV·GL



30 GLORIOUS YEARS IN THE ART OF CASTING

An Indian foundry
WITH A GLOBAL
PRESENCE



Associate Group Companies :

intolcast pvt. ltd.

STEEL AND ALLOY STEEL INVESTMENT CASTINGS

GUJARAT INTRUX LIMITED

STEEL AND ALLOY STEEL SAND CASTING

invac CAST LTD.

VACUUM & AIR MELT INVESTMENT CASTING FOR
VALVES - PUMPS - TURBINE WHEELS - ORTHOPAEDIC IMPLANTS



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