

With 40 sales offices in 40 different countries around the world, Industeel stands as one of the foremost international steel makers, with an unmatched capacity of support everywhere.



Industeel France

Saint-Chamond plant 2, rue Pétin Gaudet F - 42400 SAINT-CHAMOND FRANCE

Industeel France

Châteauneuf plant BP 368 Châteauneuf F - 42803 RIVE-DE-GIER Cedex FRANCE



Tailor-made Formed Pieces **YOUR CONTACTS** For more information, please contact: valery.ngomo@arcelormittal.com

Industeel

ArcelorMittal

All information in this brochure is for the purpose of information only. Industeel reserves the right to change its product range at any time without prior notice.

Your needs. Our drive Industeel heavy forming division

Industeel heavy forming

division located in Saint Chamond (France) is made up of a team of 40 experienced Engineers and Technicians whose objective is to produce and deliver pieces that fully meet your needs.

Key parameters for manufacturing of parts (design code, dimensions and material specification) are usually provided will

engineering department

into the Saint Chamond

be translated by our

production process.

in design optimization and the clarification of material specification with the support of our metallurgists and R & D centre.

We can also support you

For several years St Chamond heavy forming division has produced tailor-made and complex shapes with the most severe material specifications for oil & gas offshore equipment, defense applications, nuclear industry, refining and petrochemicals.



Heating before hot forming



Quality heat treatment on hemispherical 2 piece heads



Hot forming operation ^



Calibration _

Production tools for every shape A unique set of equipment to meet your needs

Tailor-made pieces require reliable and efficient production tools. St Chamond forming division has a unique set of equipment able to meet your needs:

2 forming presses (1200 tonnes and 12 000 tonnes) that can process any kind of steel (carbon, low alloy or stainless steel)

Quality heat treatment furnaces carefully controlled to carry out a variety of heat treatment (annealing solution, tempering, stress relieving...) under optimal conditions

A 5 m deep water quenching bath with a stirring system and water temperature control to ensure homogeneity of properties of heavy wall thickness pieces

Processing and control equipment (machining, shot blasting, flame cutting, NDE) that guarantee parts that are delivered fully meetingn client expectations



12 000 tonnes forming press



Quenching of formed head



Oxycutting crane

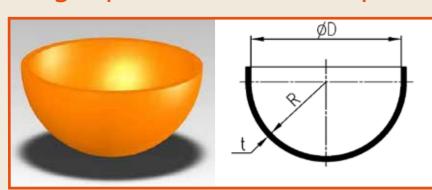
Since health & safety and quality are nonnegotiable requirements for industries we serve, our entire production workflow has been approved by the most demanding internal and third-party control systems, including world's leading design and certification bodies (ASME, ISO 9001, ISO 140001. TUV).

We are also compliant with demanding design codes for equipment dedicated to nuclear power market (RCCM, ASME III).



Our offer: a wide range of formed products Industeel

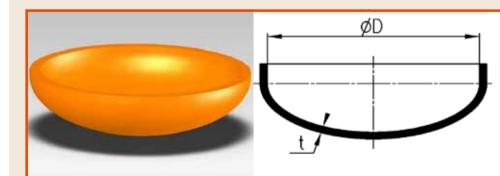
Single-piece heads (hemispherical, elliptical)



Hemispherical (1/1)

ØD: 1000 - 3500 mm Thickness (t): 30 - 250 mm





Elliptical (1/1)

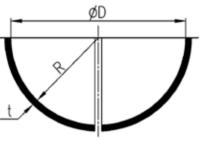
ØD: 1000 - 3600 mm Thickness (t): 30 - 250 mm



Multi-piece heads

Two-piece heads ("2/2") (hemispherical)



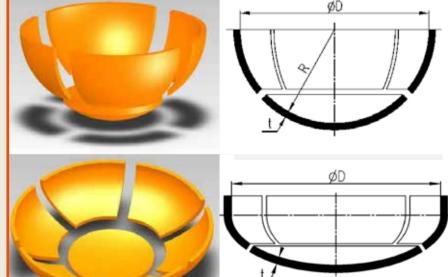


Hemispherical (2/2)

ØD: 3500 - 6500 mm Thickness (t): 30 - 250 mm

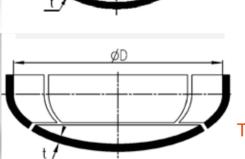


Crown and petals (hemispherical, elliptical)



Hemispherical

ØD: 6501 - 10000 mm Thickness (t): 30 - 250 mm



Elliptical

ØD: 3600 - 10000 mm Thickness (t) : 50 - 250 mm



Dimensional limits are provided for information. A tailor-made study of your request will be carried out by our design office.

Manufacturing route sequences





Other tailor-made products

Cones

Half shells

ØD: 1000 - 7500 mm



for submarine

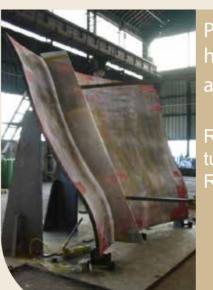


Connection pieces







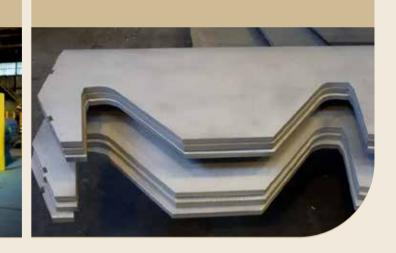


ydro-electric applications



Chords for jack-up leg

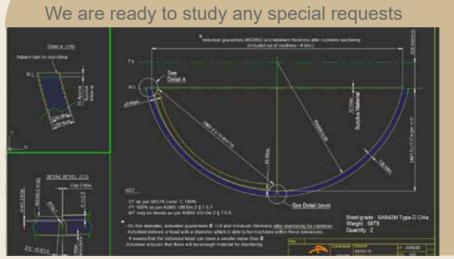
Special protection steel components for armored vehicles



Additional tolling services: Our facilities and expertise to support your needs

On request you can also entrust us special forming operations, heat treatment or surface treatment on products supplied by you

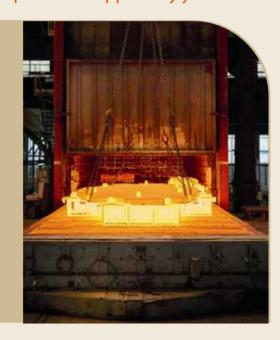
Engineering & Design



3 bogie hearth furnaces 14.3 x 4.25 x 2.00 m 13.0 x 2.00 x 1.15 m 11.0 x 4.90 x 3.30 m

Quality Heat treatment

1 mobile roof furnace 15.5 x 6.50 x 5.30 m



High precision levelling & forming

2 forming presses 1200 tonnes and 12000 tonnes





Processing

Rotative flame cutting Non-destructive testing Shotblasting Chamfering Machining