



ArcelorMittal

# Energy Projects: global steel solution provider



# Energy Projects: your complete steel solutions provider in the energy sector

With four million tonnes of deliveries to the energy sector, ArcelorMittal is one of the world's largest suppliers to this highly demanding market. Our leadership in the sector is possible thanks to the partnerships we have with our customers, our extensive product portfolio, and the highly innovative and technical solutions we offer. Along with our products, we offer project management services that ultimately support our customers to turn highly critical projects into success stories. Thanks to our extensive experience and global presence we are a reliable partner to the world's oil and gas industry.

## Complete product offer

With our extensive portfolio of products, ArcelorMittal Energy Projects can supply all high grade and specialty steels and solutions for all upstream, midstream and downstream oil and gas applications. Supply from our own ArcelorMittal mills (Tubular Products, ArcelorMittal Europe Flat Products, Long Products and Industeel), in strong combination with the support of our selected third party mills and our own stockyards, ensures the most complete and cost-efficient supply chain offer.

## Value added services

We support our customers with high value and specialized project management skills throughout the life cycle of each project. Depending on the client's or project's needs, we offer a comprehensive range of services such as: processing, pre-fabrication, storage & handling, documentation, project management, tailor-made logistics, technical support, quality control and inspection.

With the industry experiencing a shift in regards to digital transformation, ArcelorMittal has already taken key steps on digitalisation. The new technologies will help ensuring our customers' needs to be met, quality of our products as well as increasing efficiency and service level.

## Innovation

ArcelorMittal has always played a leading role in innovative products and solutions. With our Global R&D team of over 1300 researchers, we undertake several joint industry programs together with our customers to meet the challenges of extracting and producing hydrocarbons.

Beyond new steel products development, with our specialist teams we offer services of co-engineering for new applications and solutions, such as:

- improved corrosion resistance including coatings
- innovative steel substrates to cope with high pressures, high temperatures and sour service environments
- lightweight design of offshore platform topsides and subsea structures
- new steel solutions for transport and storage of liquefied natural gas
- technical advice and support covering the use of sections and merchant bars (design of structural elements, construction details, welding, fire safety).

## Experience

Safety and sustainability standards can only be secured if the steel producer maintains a high level of quality and know-how. ArcelorMittal's certified products and experience with several hundred projects in the oil and gas sector stand as an evidence of the quality of our solutions and high quality steels. With our experienced and highly skilled people, we ensure reliable quality, services and support in all levels and disciplines.

## Global presence

ArcelorMittal's global sales and production presence covers most oil and gas producing regions of the world including Africa, Europe, Middle East, North and South America, South-East Asia and China. This enables ArcelorMittal Projects to guarantee our customers a local partner for the best support, services and solutions.

## Customer proximity

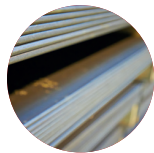
We are connected to our customers through our global network of offices and service centres. By working closely with our customers, ArcelorMittal can ensure optimum and tailor-made steel solutions and services.

We guarantee a prompt supply chain using local service centres, just-in-time deliveries of our products, and we can even support with dedicated project management services.

We take every opportunity to understand our customers and their requirements in order to find the ideal solution to every need and challenge they face.

# Products

ArcelorMittal's high quality products include offshore structural grades, thermo-mechanically rolled steels for offshore applications proven down to -40°C, and high strength steels which can be used in harsh and sour environments.



## Plates

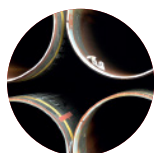
Our high strength plates sizes can be standard or tailored to your fabrication and design requirements with minimum order quantities as low as 2 metric tonnes per size.



## Beams & sections

Our structural beams and sections are produced in the highest quality such as our proprietary Histar® grade. The size range includes the following:

- American (W size)
- British (UB/UC size)
- European (IPE/HE/UPN)



## Pipes & tubes

Our product range covers almost the entire requirement of the energy industry.

- OCTG (Oil Country Tubular Goods)
- seamless riser and flowlines
- offshore structural
- seamless line pipes
- large diameter spiral & longitudinally welded line pipes
- process seamless (carbon & alloy)



## Krybar®

Krybar® is a specially designed reinforced steel bar for the construction of cryogenic LNG tanks. It has high ductility, even at very low temperatures (down to -170°C/-274°F). Krybar® has proven track records complying to EN14620 & BS7777.



## Alupur® (Aluminized Type 2)

Alupur® combines the strength and fire resistance of steel with the corrosion resistance of pure aluminium.

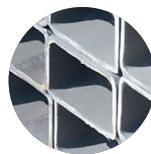
ArcelorMittal's Alupur® can be used as jacketing or cladding material in refineries, petrochemical facilities, gas power plants, oil storage facilities, liquid natural gas terminals, grain silos, and pipe cladding.



## Mooring wires

Designed to suit engineering and oil companies requirements and used for floating production systems (FPSO, FPU, DWB, SPM, etc) moored on oil fields for long term life periods, at various water depths, up to 1,500 meters.

High strength and very good torque balance, for periods up to 35 years in sea water, on static conditions.



## Hollow sections

Hollow sections can be provided according to standards EN10210/EN10219/EN10225. Suitable for all construction and mechanical applications. We can supply cold formed and hot formed round, square and rectangular high strength hollow sections. Hot formed hollow sections can also be delivered in seamless execution.



## Bulb flats

Bulb flats are being used as plate stiffeners especially in the shipbuilding industry. Our bulb flats are supplied according to international standard for shipbuilding (ABS, DNV-GL, LRS) as well as grades according to EN 10225/S355G11+N for offshore applications.

## Stock program

### Seamless pipes

- API 5L X52/L360 PSL 2
- EN 10225 G15
- Norsok M-120 Y22
- API 5L X65/L450 PSL 2

### SAW welded pipes

- API 5L X52/L360 PSL 2
- API 5L X56/L390 PSL 2
- API 5L X65/450 PSL 2

### Offshore plates

- API 2W Gr 50/Gr 60
- API 2H Gr 50
- EN 10225 S355 G10+M
- EN 10225 S420 G2+M
- EN 10225 S460 G2+M
- Norsok M-120 Y20/Y30/Y40

### Offshore sections

- EN 10225 S355 G11+M
- EN 10025 S355ML
- Norsok M-120 Y26

### Alupur®





# Applications

## Offshore Oil & Gas

### FPSO & FLNG

Our comprehensive range of shipbuilding grades products and services are suitable for floating and processing units and drilling ships. We offer products for hull fabrication, topsides modules and turret fabrication, flowlines, line pipes, and mooring systems.

### Fixed offshore platforms

We supply high strength offshore steel according to international norms and safety standards for different offshore segments such as jackets, tripods, rigs, decks and topsides.

### Subsea structures

New platforms are being continuously installed in different parts of the world and operate in deeper and deeper waters. The safe and efficient interconnection from the topside platforms and vessels to the wellheads and pumps on the seafloor is necessary to guarantee reliable oil extraction operation



## Offshore wind energy

Pipelines are used to transport fluids/gases under pressure and also oil, gas and refined products through complex networks of interconnected pipelines used in processing plants. We also provide value added services such as pre-fabrication and preservation. All our steels are in full compliance with applicable standards specific for this industry.



## OCTG

Energy Projects is able to offer OCTG casing, tubing and various tubular accessories according to all international standards. Products are manufactured from seamless hot-rolled tubes and fitted with different types of connections

- Threaded and coupled (TNC) according to AP
- Semi Premium connection for Shale business across the world
- Premium connection (Cal. IV) according to ArcelorMittal patented design for more strengthened conditions

## Line pipe

### Onshore line pipe

We supply:

- Line pipes that are used to transport fluids or gases under pressure
- Line pipes for plants: to transport oil, gas and refined products through complex networks of interconnected pipelines used in processing plants

### Subsea umbilicals, risers and flowlines (SURF)

We are able to supply risers and flowlines that bring hydrocarbons from the wellhead to the surface and then route them to the processing plant.



## Onshore Downstream

### Refineries & Processing (HPI)

We provide high-quality seamless steel pipes and pressure vessel plates for refineries, petrochemicals complexes and gas processing units with tailored logistics and services. We supply products in carbon and alloy steels in a wide dimensional range suitable for the toughest and most demanding environments and various applications.

### LNG & storage tanks

We supply various products for Modularized Processing Modules and Storage Tank Terminals. Some of these products are:

- structural tubulars
- plates beams & sections
- krybar® (cryogenic reinforcement bars) used for LPG/LNG tank construction

### Insulation ((Alupur®)

Protecting structures in the event of a fire is a major challenge for the oil and gas and petrochemical industries. To ensure the safety of workers and installations, superior fire-resistant products are required. Our solution: Alupur®

