

**STEFANO AVENATI BASSI
PROPOSAL & SALES
MANAGER
FATA EPC**

**4TH IIAC IRAN INTERNATIONAL
ALUMINIUM CONFERENCE
OLYMPIC HOTEL
TEHRAN, IRAN
11-12 MAY 2016**

FATA EPC THE RELIABLE PARTNER FOR SMELTER PROJECTS IN IRAN

**DANIELI
PASSION TO INNOVATE
AND PERFORM
IN THE METALS INDUSTRY**



1. OVERVIEW OF FATA
2. ALUMINIUM SMELTER
DESCRIPTION
3. FATA IN THE ALUMINIUM
SMELTER INDUSTRY
4. PROJECT REFERENCES -
HORMOZAL
5. PROJECT REFERENCES -
QATALUM

FATA SpA was established in Turin (Italy) in 1936 as a manufacturing concern. Today its operations are split into 2 main divisions:

FATA EPC with 60 years of experience in the field of industrial plant engineering, contracting and manufacturing; Danieli FATA Hunter with distinctive capabilities in engineering and equipment manufacturing for the aluminium flat rolled products industries.

FATA is part of Danieli Group.





FATA EPC DIVISION

Power

- > GT Open and Combined Cycle
- > Co-Generation
- > Renewables



Metals

- > Primary and Secondary Aluminium
- > Downstream Facilities
(aluminium, steel, copper and magnesium)



Oil & Gas

Chemicals

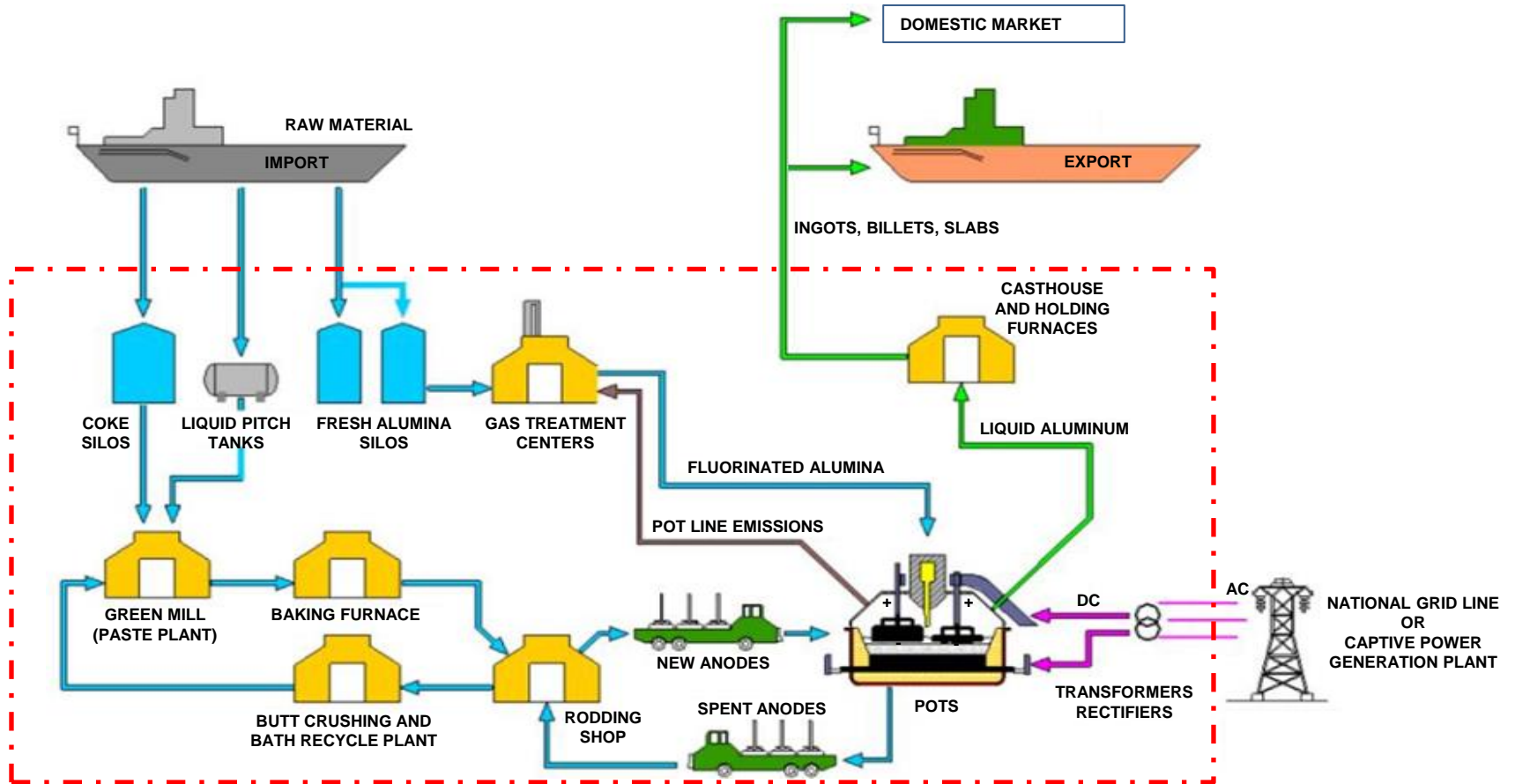
Petrochemicals



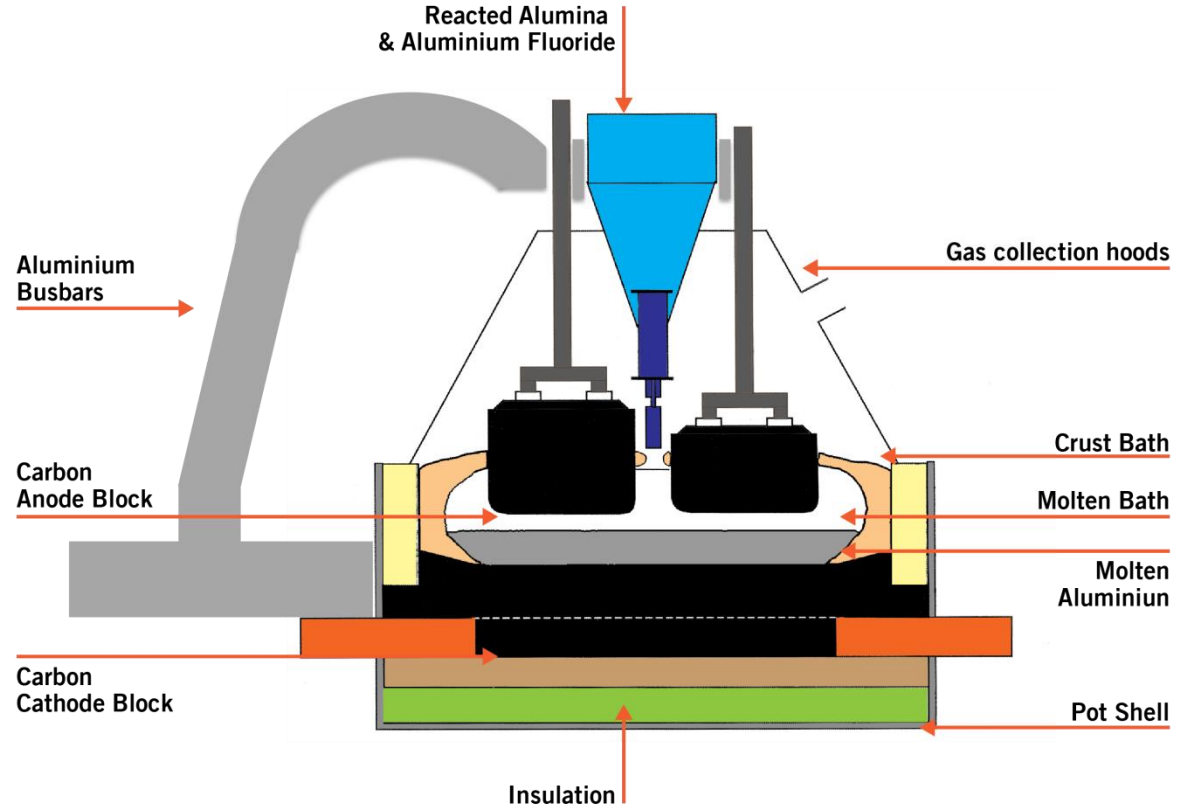
DANIELI FATA HUNTER DIVISION

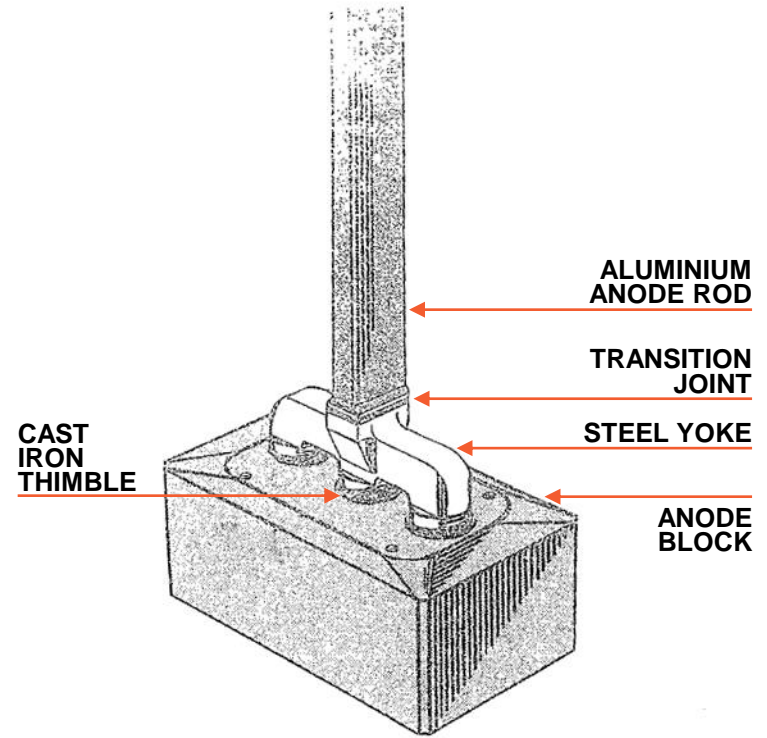
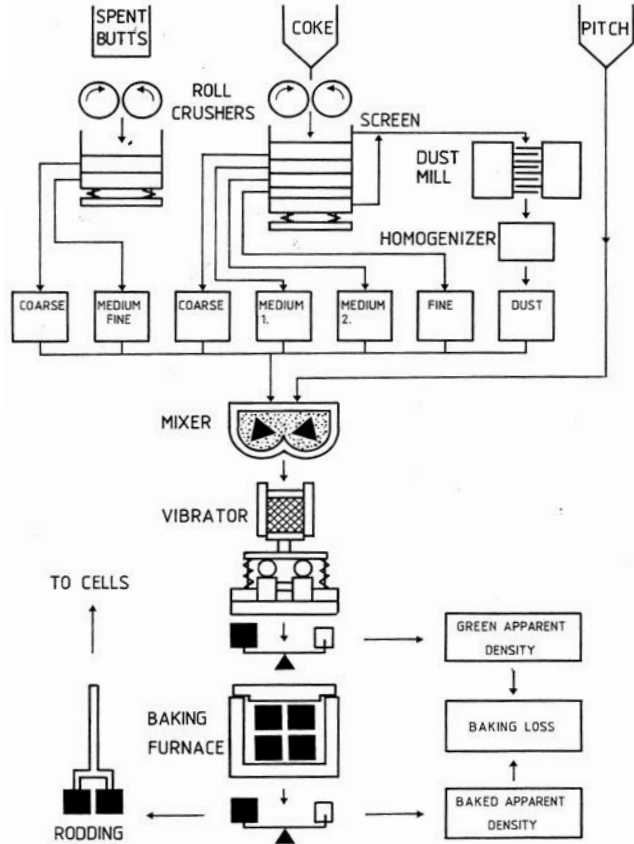
Engineering & Equipment Manufacturing for Aluminium, Steel, Stainless Steel, Copper, Magnesium:

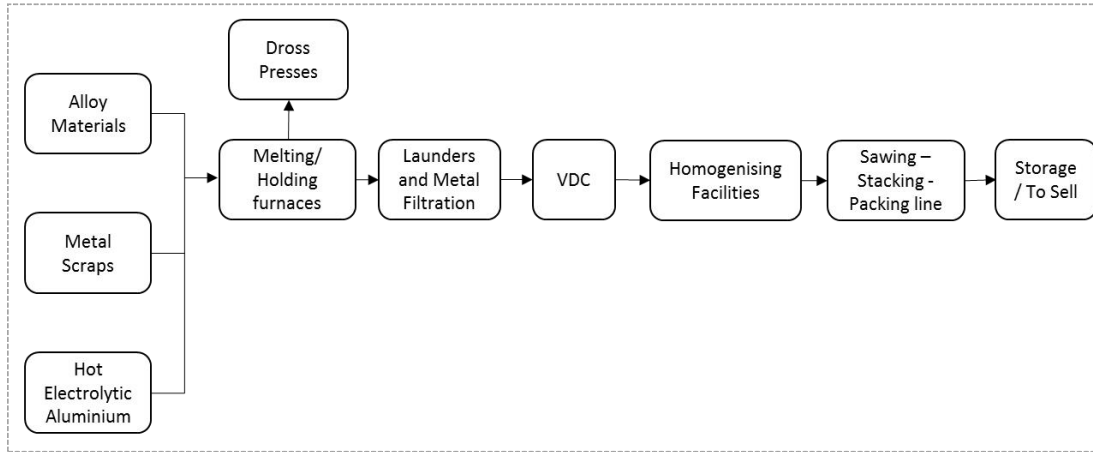
- > Continuous Casting Lines
- > Hot Rolling Mills
- > Cold Rolling Mills
- > Foil Rolling Mills
- > Finishing Equipment
- > Packaging Equipment
- > Coil Coating Lines



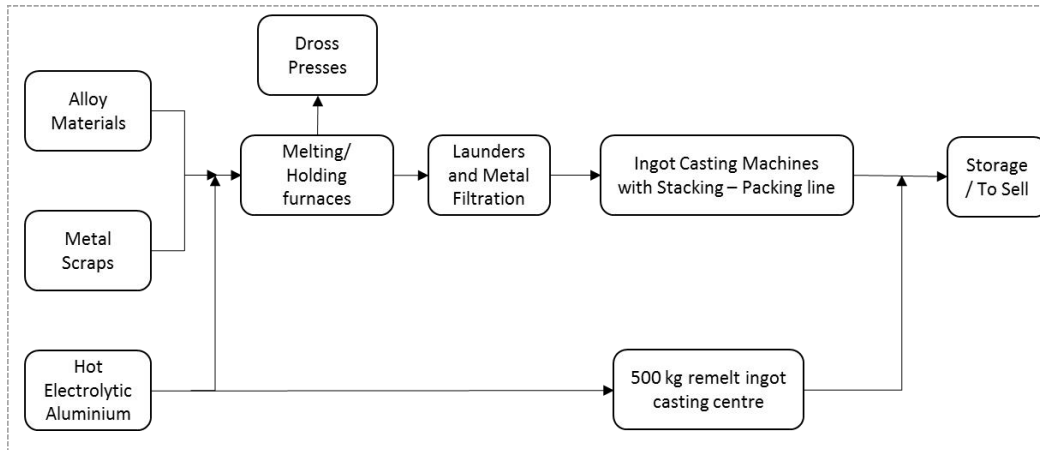
Technology for the Potline
is typically imposed by
Client, BEING INCLUDED
IN A direct LICENSE
AGREEMENT







BILLET & SLAB CASTING AREA



INGOT AND SOW CASTING AREA





CASTHOUSE

POTLINES

CARBON AREA

1. EPC PROJECTS MANAGEMENT

- > 50+ year track record of general contracting in metals, power generation plants, chemicals
- > Proven capability to deliver large complex projects on time and on budget
- > First class performances in hse and quality assurance, via adoption of most stringent procedures and international control methodology

2. VAST INTERNATIONAL EXPERIENCE INCLUDING A CONTINUOUS ESTABLISHMENT IN IRAN OVER PAST DECADES

3. OUTSTANDING ENGINEERING CAPABILITY AND PROCESS KNOW HOW IN THE ALUMINIUM SECTOR:

- > Complete systems: potline, casthouse, baking furnace, captive power plant, utilities
- > Specific in- house technologies: gtcs & ftcs, melting/holding furnaces, homogenising facilities, cranes, electricals & automation

4. SUCCESSFUL EXPERIENCE IN ARRANGING FINANCING SCHEME

5. ENGINEERING:

- > In-house detailed engineering
- > Design reviews and safety reviews at various stages

6. PROCUREMENT:

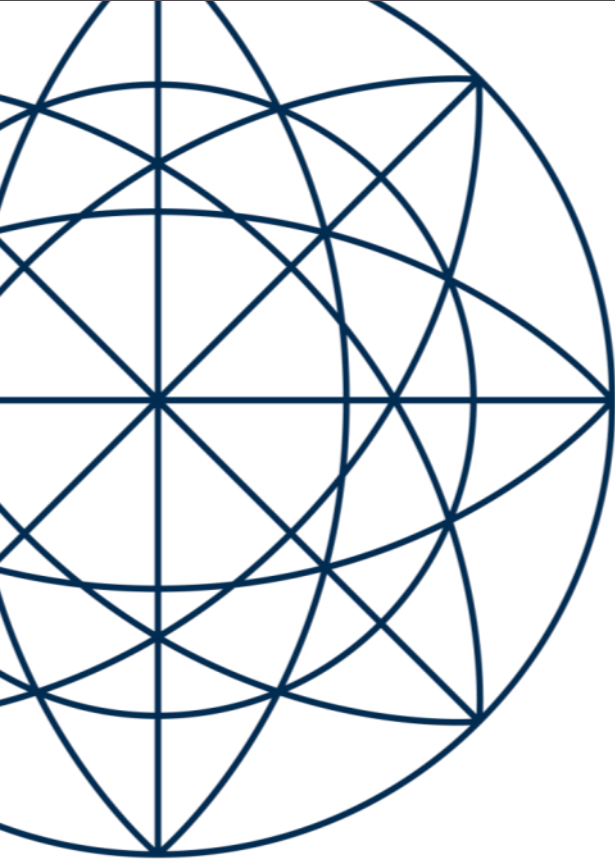
- > Top class western vendors for critical process equipment
- > Maximisation of the local fabrication works and supplies to drive maximum in-country value to local economy
- > Robust expediting / inspection plan

7. CONSTRUCTION

- > Subcontracting of the construction works to specialised local contractors
- > Arrange for a properly staffed FATA site team to manage and coordinate site activities
- > Site team utilising competent local resources
- > Deploy skilled QC and HSE officers to grant compliance with tight FATA rules as far as safety and quality control

8. COMMISSIONING AND STARTUP

- > Utilise skilled FATA and vendors' resources to carry out commissioning activities
- > Provide client with startup assistance to grant smooth and successful plant startup



EPC CONTRACTOR IS FULLY RESPONSIBLE OF:

- > Cost at project completion as the EPC contract is based on lump sum price
- > Time for project completion
- > Quality of design and works
- > Compliance with HSE requirements
- > Full achievement of performance guarantees
- > Management of all risky interfaces between various subcontractors during all phases of the project

THUS, AN EPC CONTRACT GRANTS:

- > Single point of responsibility
- > All the project risks are transferred to the EPC contractor

ALMAHDI ALUMINIUM

Location: Bandar Abbas (Iran)

Capacity: 147,000 tons/year

Peak Workforce: 1.500

Process Facilities:

Potline no.2

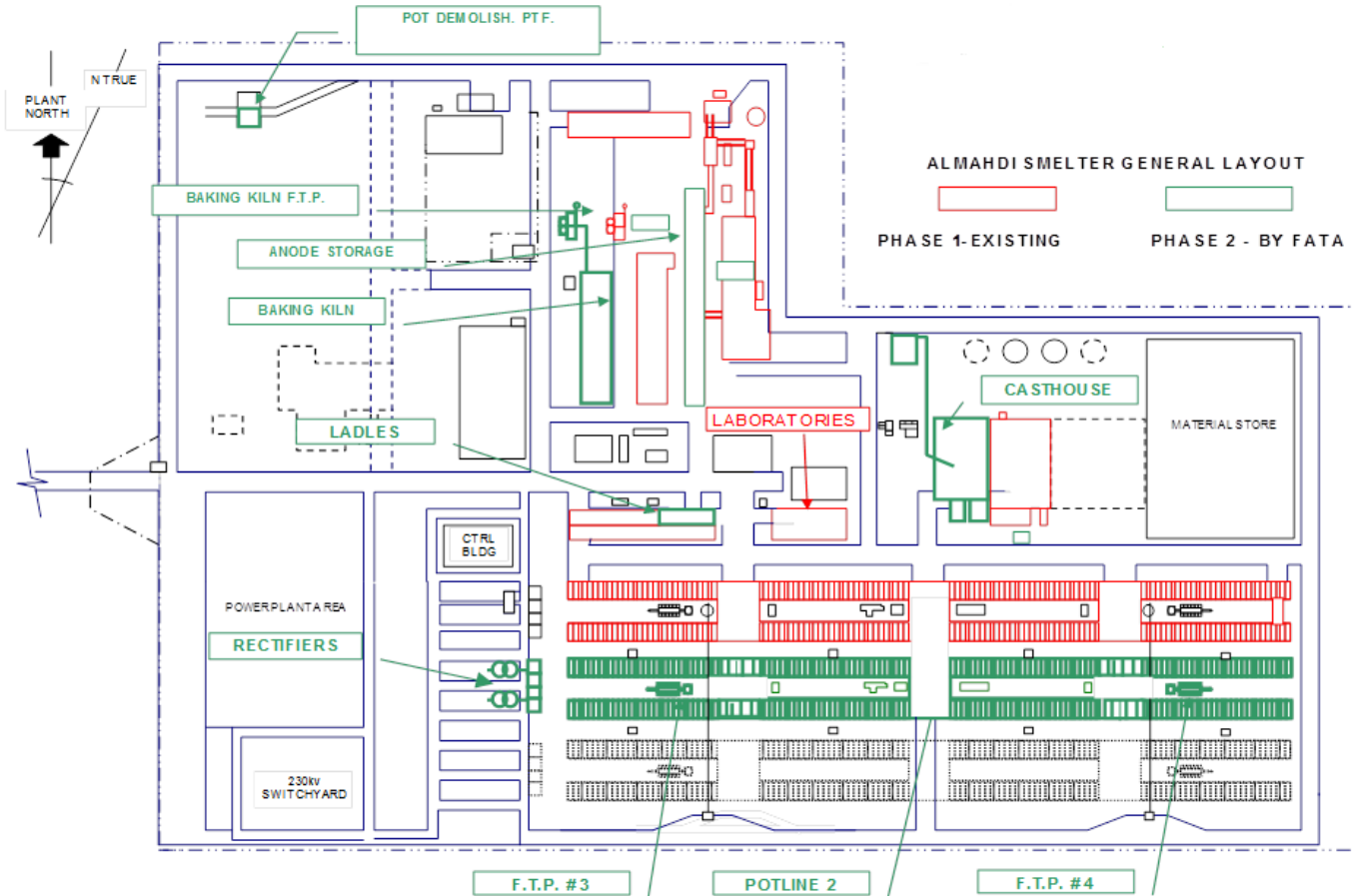
- > 2 pot rooms, 228 pots at 225kA, Dubal D20 technology
- > HV substation and Rectifier Transformers
- > Alumina Storage and Pot feeding system
- > 2 Gas treatment centers
- > 7 Pot Tending Cranes
- > Pot dig out and repair facility

Anode Baking Plant no.2

Casthouse expansion (20tph ingot casting line)

MV/LV Power distribution and Utilities





ACHIEVEMENTS

- > On time project completion within contractual schedule (36 months for first metal)
- > Completion within client's budget
- > Achieved plant performances in terms of production capacity and of product quality
- > 6 million man-hours only with no incidents, thanks also to the efficiency and skills of the Iranian subcontractor and to the successful cooperation with the client

MAXIMIZATION OF THE IRANIAN CONTENT

- > Significant portion of local fabrications, such as for example pot shells, building steel structures and cladding, anode yokes, ducting and steel structures for fume treatment plants, and the like
- > Subcontracting of the construction works (civil works, steelwork erection, pot lining installation, electro-mechanical erection and the like) to Iranian contractors
- > Dedicated FATA teams in Tehran and on site being staffed with a significant number of Iranian resources to supervise detailed fabrication engineering, local manufacturing and site construction works

FINANCING SCHEME

- > Project financing been arranged by FATA via a pool of western banks and the Italian ECA (SACE) insurance

QATALUM

Location: Mesaieed (Qatar)

Capacity: 625,000 tonnes per annum

Products:

- > Extrusion billets (350 tpa);
- > Foundry alloys ingots (275 tpa)

Process Facilities:

- > 11 Furnaces
- > 2 VDC casting lines
- > 3 Ingot casting lines
- > Batch and continuous homogenising lines
- > Metal treatment equipment
- > Metal fluxing stations
- > Tapping vehicles
- > Crucible cleaning
- > Cooling water plant



QATALUM

Location: Mesaieed (Qatar)
Capacity: 330,000 tpy

Products:

- > Baked anodes

Process Facilities:

- > Baking Furnace A, 66 section, 4 fires
- > Baking Furnace B, 50 sections, 3 fires
- > 4 Furnace tending assemblies
- > Fume treatment plant
- > Green and baked anode storages
- > 2 automatic anode handling cranes
- > Anode conveying system
- > Slot cutting machines



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