

TENDER No: 401-04 MS**Tender Instruction****1- Date: 25th June 2022****2- Subject:****- call for eligible and experienced Contractors for an EPC tender****“Engineering, procurement and commissioning the new cast house” in Iran aluminum Company (IRALCO) -Arak, Iran****3- Deadline:****- Interested companies may send their technical proposals until 3th July in sealed pocket to below mentioned address:****- PO Box 31, opposite Bahonar Park, Natural Resources Boulevard, Arak- Iran;****- Postal code: 3818998116****- Name of office: Secretariat of the Transaction Committee, Iranian Aluminum Company (IRALCO)****- Tel: +98 86 32162014****- +98 86 32162181****- Attention : Mr. Omidi - Mr. Nabiuni;****4- Estimated cost of project : 15.000.000 \$****5- Place : site of the Plant located at Arak city, Iran****6- More information:****- Interested bidders may obtain further commercial information by sending email to email address : e.mohammadi@iralco.net****- In charge person for current tender: Mrs. Elahe Mohammadi****- Tel: +98 86 32162014****- Cellphone – WhatsApp: 00989183610146****- WeChat ID : wxid_k22z6mfcraio22****Terms and conditions:****1- If participants are not able to send sealed envelopes on the base of above instruction, they can mail their document to secretariat of the transaction Commission to this address in due time: tenders@iralco.ir****2- Envelope requirement :****- Envelops should be sealed and addressed by below information:****1- Name of Contractor****2- Number of Tender,****1****Address : NO 31 Iran Aluminum Company, Manabe Tabiee BLv.Arak, Markazi Province, Iran. postal code3818998116
Central Office : NO.49, Mollasadra St. Vanak Sq Tehran-Iran. Postal code: 1991614581****Email : commercial@iralco.net****Tel/ Fax: +98 8632162402 . Tel : +98 21 88049046****Fax: +98 21 88049045**

- 3- Stamp of Company**
- 4- Name of representative and phone No.**
- 5- Sign and stamp all technical proposal on tenderer's letterhead**
- 6- Sign and stamp all supporting document**
- 3- Interested bidders should have carried out similar business experiences for this special scope of work in last 10 years.**
- 4- Tenderer should submit all supporting documents to prove its capabilities for having already similar contract. The company shall also submit the performance certificate.**
- 5- Qualified tenderers will be asked to participate in limited tenders and submit their price offer.**

Annex I
(Technical specification and terms)

Technical data and equipment for developing new cast house in IRAN ALUMINIUM COMPENY

“Casting billet and ingot (all grade alloys)”

- Contractor is obligated to consider and supply all necessities issued and prepared by Owner.
- All given data are according to 7 inch billet casting and consigned criteria in cast house is 7 inch billet. In terms of changing billet's size, technical data will revise accordingly.
- Contractor should hand over all needed technical data including, layout (all equipment plot plans), installation and mechanical drawings to Owner before starting construction and installation.
- During equipment construction period, Contractor should hand over Owner all technical data and drawings related to exhaust, pool, electrical room, pressure room, cooling tower constructions and all needed equipment which are providing by Owner.
- Training, manual instructions, HSE obligations and notices related to equipment and machineries, which are included in Contractor's obligations, are on Contractor.
- After commissioning, Contractor is responsible to hand over two series, hard copy and CD, of all AS-Built drawings (mechanical, electrical, installation) to Owner's agent.

50 Tons Furnace Melting and Holding

Capacity: 50 tons

Europe standard

-TS EN ISO 3894-2, EN ISO 13920 B/F, EN 746-2, TS EN ISO 3894-2

-TS EN 60204, TS EN 983+ A1, TS EN 14122-1, DIN 24339-A

Melt rate: 7 tons/h

Regenerative Burners

Tilting Furnace

Pruss plaque degasser system from the furnace floor

Proportional control system with laser melt flow meter

Refractory system in the form of mass and spray

Maximum temperature of the outer body of furnace should not be more than 100 °c

Degasser Unit System

Capacity: 35 Tons/h

Metal storage temperature: 800 °c

Gas injection capability N₂, Cl₂, Ar

Unit filter

Melting temperature: 700-730°c

Met holding capacity: 700-800 kg/min

Mesh filter 20-40 ppm

Pre healing system

DC Table

Capacity: 25-30 ton

Billet shed system (oil/air)

Billet Length max after cutting: 7m

Thickness of the oxide layer 250 μ > 0

The amount of defection of the billet is 1 mm per meter and more than 5mm in length of 6m \varnothing +0 -2mm

Air unit control, oil/water and all control equipment should be proportional and under PLC control.

Homogenizing Furnace

Capacity: 40 tons

Maximum Length before cutting 7m

Maximum temperature 620° c

Regenerative burners

Ability saving energy

Air circulation reverse

Cooling cabin:

Capacity: 40 tons

Billet cooling system (air circulation and water spray)

Cooling speed at maximum 350-600 ° c less than half and one hour and 4 hours in ambient temperature

Stackers and de-stacker system Length before cutting 7/3m

Gripper capacity 6-8 tons long handling capability

Billet cutting Machine

Shortcut / Long cut

Ability to cut long length 730CM

Ability to cut short lengths of 40CM-120CM

Automatic Packing and weighing system

Cutting capacity (each end of 7 " : 20sec/h, 45-50 billet cutting)

Chip suction system

Bundle decoration system

Machine charging

Capacity: 50 ton

Note: all equipment including cooling mechanism. Homogenous, stacker machine ... should be under an integrated system and PLC controlling mechanism

Pig Machine

Capacity: 8-10 ton/h

Continuous cooling system with air and water

Provided data for each unit should consider for final needed capacity of this line. Total needed equipment and machineries are as below:

- 1- 50 Tons Furnace Melting and Holding: five units
- 2- 30 Tons Furnace Melting and Holding: one unit
- 3- Billet casting machine: two units
- 4- Billet cooling cabin (by 40 tons capacity) after homogenizing: two units
- 5-Machine charging: one unit
- 6-Stacker/destacker system: one unit
- 7- Billet cutting machine: three units
- 8-Degassing system: three units
- 9-Filteration system: three units
- 10-Ingot casting machine: one unit

Considering the requested quantity of the machines this cast house have 180t/24h capacity (different kinds of alloys) and 400t/24h aluminum billets by 10-15 % production tolerance.

All items mentioned in the tender instruction and technical attachment (6 pages) have been read and accepted

Stamped and signed (all pages):