

## 2.0 ZUMARRAGA WIRE ROD MILL – TECHNICAL DETAILS

2.1 During regular operation before April 2016, the mill had undergone upgradation adopting modern technologies and practices. The mill had capacity more than 800 KTPA with different grades of steel from 5.5 mm to 25 mm including rebar. Grades included free cutting, forging, cold heading, welding electrodes apart from high carbon, low carbon & mesh.

All equipment was lubricated by auto lubrication system. Lubricating Oil and hydraulic oil handling facilities were designed in a safe manner.

Following is the configuration of the mill,

Type of Mill Two strand wire Rod Mill with 29 passes  
Operating speed 95 MPS  
Technology Morgan and Demag

Billet input size 160 x 160 mm or 210 x 160 mm

- Furnace Walking beam with computerized control system.
- Scale breaker Hydraulic scale breaker with 120 bar pressure.
- Roughing mill 6 stand **HV** configuration (Facility exists with 7 stands, 7<sup>th</sup> stand is not in use). Box/oval/Round pass sequence.
- Bar holding space 58.5 m with strand feeder.
- First intermediate Mill Seven **H** conventional stands with oval round sequence.
  
- [From here the mill continues with two strands.](#)
  
- Shear Circular shear with 120 degrees knife.
- Second Intermediate Mill Four **HV** stands with vertical loopers between each stand.
- Pre-primary water box Morgan design split type, 4.7 m long.
- Shear Rotary shear to cut front and tail of the bar.
- Pre-finishing block Ten stand '**K**' type Demag block with single drive (Connected with 3 x 880 kW motor).
- Water box Split type Morgan water box 6.1 m long.
- Finishing Block Morgan two stand single driven '**V**' type; dwell motor.
- Water Box Split type Morgan three water boxes each 4.7 m long.
- Pinch roll Morgan design, double driven.
- Laying head Morgan design with 20 degrees slope with adjustable flap.
- Coil conveyor Morgan design, in five segments with lowering beam of first segment; total 74 m.
- Air cooling fan Tangential, with air flow diverter; first and last motors are low rated.
- Coil collecting station Morgan design, single finger with ring distributor
  
- Coil conveyor Vertical travelling mandrel with two coil transporting coil car.
- Power free '**C**' hook capable to load 3 mt coil, 40 numbers with coil weighing facility.
- Compactor Two, Sund Birsta, 7 mm wire feed type.
- Coil transport and storage With overhead crane and '**C**' hook.