
Large dia pipe mill starts production at Zhongyou BSS Petropipe

Friday, 28 Aug, 2009

SMS Meer fourth L-SAW pipe mill in China successfully Commissioned A large diameter pipe mill, supplied by SMS Meer, Germany has been successfully commissioned at Zhongyou BSS Petropipe Co Ltd in Qinhuangdao about 300 kilometers east of Beijing, China.

The company is a JV between the Malaysian UMW group and Baoji Petroleum Steel Pipe Co Ltd a subsidiary of CNPC, China's largest oil and gas producer and supplier.

The new JCO mill has an annual capacity of up to 150,000 tonnes is the most modern of its kind in China. It will be used to produce longitudinal submerged arc welded steel pipes with diameters from 508 up to 1,422 mm and wall thicknesses up to 40 mm in lengths of max 12.2 meters and material grades up to X100.

SMS Meer supplied and installed the key machines for the plant including a plate edge milling machine, the technological components of the crimping press, a JCO pipe forming press, a hydraulically adjustable tack welding machine and a mechanical expander.

The JCO pipe forming press is designed as a short-stroke version and operates with a maximum press force of 65 MN. The plate with milled and subsequently crimped edges is stepwise formed over its whole length by a patented forming tool. This results in an open seam pipe with parallel longitudinal edges offering optimum preconditions for pipe welding.

In the roller cage of the tack welding machine the gap between the two longitudinal edges of the open seam pipe is continuously adjusted parallel and tack welded under inert gas. This tack weld serves during the subsequent submerged arc welding process as a weld pool backing. To ensure that the plate longitudinal edges are brought optimally together the rollers beams of the roller cage are individually adjustable servo hydraulically even under load, if necessary. This hydraulic machine concept is being delivered for the first time to China.

The main tasks of the mechanical expander are sizing and straightening of the pipes. Through gradual cold forming with an expanding head the pipes are straightened over their whole length and given an accurate roundness with an exact inside diameter. This simplifies the later laying of the pipes in the field as the cross-sections fit perfectly together, even when cut in the field as the pipes are sized uniformly over their full length. During the deformation of the pipe the yield strength of the material is exceeded by plastic deformation between 1 and 1.5 %. Thus the mechanical properties are improved by strain hardening and compensation of residual stresses created during the forming process.

For more news visit at www.steelguru.com