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PERT GRINDING BALL ROLLING MILL

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Nowadays grinding balls production process is mainly done by casting or by pressing, processes which involves anyway low productivity and poor quality on finished products.
PERT has developed a new revolutionary rolling mill to produce high quality grinding balls by rolling process, starting from a round bar coming from upstream bar mill rolling.
Round bars are heated up by a traditional gas/oil fired or by induction furnace and then rolled by means of a single stand which rolls the round bars into grinding balls of different sizes, ranging from diameters 20 mm up to 150 mm.
Rolls grooves design is the technological core of the process, in fact helicoidal groove has been designed for this particular application, guaranteeing a perfect ball shape and roundness.
Rolling line is composed by a discharging roller table, equipped with heat retaining covers, a set of pinch rolls which transfer the bar along the line, a set of fixed and rotating guides and a rotating pinch roll which push and rotate the bar before stand entering.
An inline heat treatment is foreseen to achieve the required surface and volumetric hardness, followed by an equalizing horizontal cooling bed and final balls storage and automatic packaging equipment.
Rolling process can guarantee a very high productivity rates, starting from 2 tph for smaller sizes up to more than 30 tph for bigger sizes.
Real cases of grinding balls rolling mills will be showed, mainly regarding plants supplied in India (Customer : JSW Steel) and Turkey (Customer : ETI BAKIR).

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