

Press Release

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Greater Productivity through Maximum Torque Capacity – voestalpine Grobblech Successfully Puts Innovative Voith High- Performance Drive into Operation

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As part of its plant modernization in the heavy plate mill in Linz, Austria, voestalpine Grobblech GmbH opted for the newly developed high-performance drive from Voith. The 'GearLink' concept, consisting of two high-performance universal joint shafts and two curved-tooth coupling shafts, was put into operation in the world's most efficient and powerful rolling mill main drive at the end of 2013. The GearLink concept enables a high level of torque transmission, unprecedented in rolling mill construction, to be achieved with very small roller diameters. This allows the operator to expand their product portfolio with further deformation processes and enables them to increase productivity while simultaneously improving quality.

The modernization of the rolling mill has made it possible to roll significantly tougher – and therefore higher quality – grades of steel with a width of up to 4.2 m. The two main drive shafts each transmit torques of 7500 kNm without fatigue based on a minimum roller diameter of 980 mm – this capacity has not previously been achieved in rolling mill construction. In contrast to conventional slipper spindles, modern universal joint crosses minimize play in the drive. Power loss as a result of friction and the environmental impact of lubricants are also kept to a minimum.

The development of the new GearLink concept is the result of close collaboration between voestalpine Grobblech, BUMA engineering and Voith. Universal joints with a rotational diameter of 1300 mm are used in the voestalpine Grobblech rolling mill. The fully forged CHF 1300.8 universal joint shafts are all of varying length, which results in the shafts being offset on the roller side. This means that shafts of equal size can also be used on the roller side regardless of the roller diameter of 980 mm. The GearLink element (a curved-tooth coupling shaft) guarantees the connection be-

tween the offset shafts and the coupling sleeves. This reduces the load of bending moments on the roll journals to the greatest extent possible and allows the axial CVC (Continuous Variable Crown) displacement of the rollers. The coupling shaft also provides an axial emergency outlet in case of oblique fractures of the rollers.

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voestalpine Grobblech uses materials of the highest quality to produce steel sheets which are used, for example, in the construction of pipelines.

Page 2 of 3

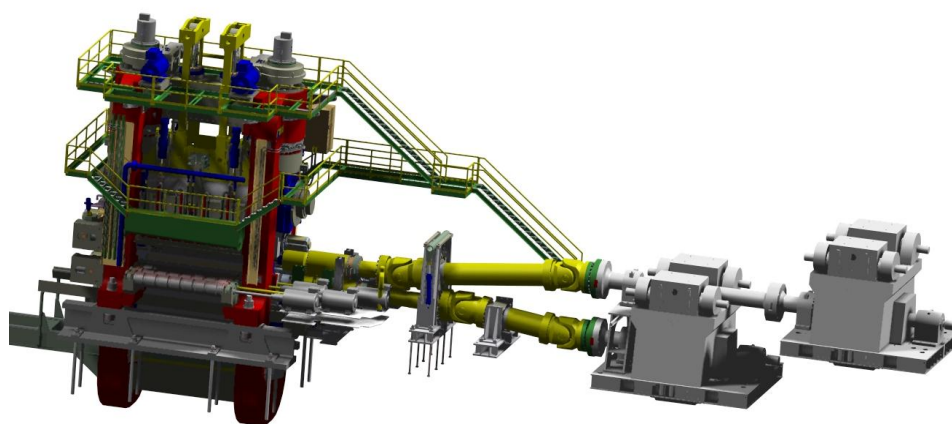


Figure 1: The GearLink concept from Voith enables a high level of torque transmission, unprecedented in rolling mill construction, to be achieved with very small roller diameters.

Voith Turbo, a division of Voith GmbH, specializes in intelligent drive solutions and systems. Our customers in the oil and gas, energy, mining and metals processing, marine propulsion, rail and commercial vehicles industries rely on solutions from Voith.

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Page 3 of 3

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