

Ovako Imatra - Case Study Report of a heavy duty Industrial gear restored with RVS Technology treatment.

Ovako is a leading European producer of engineering steel for customers in the bearing, transportation and engineering industries. The production covers low-alloy steels and carbon steels in the form of bars, tubes, rings and semi-finished components. The company has production plants in 11 locations and several sales companies in Europe and the USA. Net sales in 2011 were EUR 1,121 million and the number of employees was 3,239. Total steel production capacity is 1.3 million tons per year.

Ovako Imatra Oy Ab The Imatra Steel Works supplies low-alloy round and square bars to the demanding automotive and engineering industries. Its main raw material is scrap, which can be recycled 100 %. Annual capacity is ca. 300 000 tons. Personnel numbers are 600 employees.

Below pictures of the teeth of a double-helical gear of a Drift Gear countershaft of a Roller Mill owned by Ovako Imatra, a major steel company in Finland. TriboCeramic (sometimes also called Metal Ceramic, Ferrocilicate) layers produced by the RVS Technology compound can be observed on the gear teeth.

The gear is from 1971. The teeth were in bad shape and serious pitting was detected on the surfaces of the teeth. The manufacturer quoted a new gear to a price ca. 0.8 Million Euro and a delivery time over one (1) year. In these circumstances the company decided to try the efficiency of RVS Technology Protection & Restoration technology products.



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Below are the inspector's statement and photographs.

The device in question is a Drift Gear, location: 6040KÄ01, Gear brand: Danieli, type: GPR.550.13, number 77.78.623

Traces of earlier strong pitting are detected. The pictures show that the teeth have now partly been covered with TriboCeramic compound. TriboCeramics area has been marked with red color on some teeth. The existence of the ceramic appears as a polished area around and on the pitting pits. The pits are "filled and leveled" with TriboCeramics.

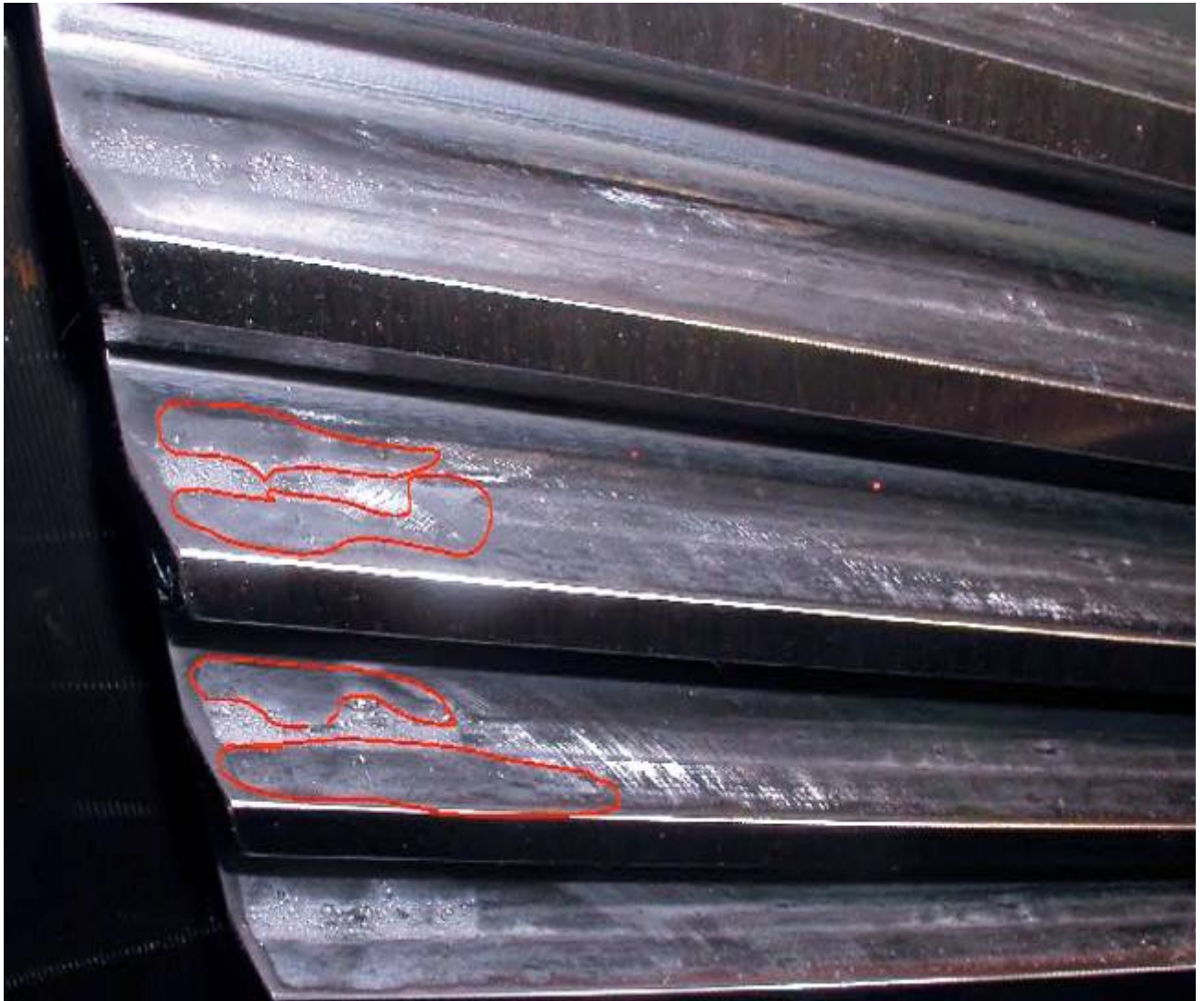
Pictures have been taken in three sequences, 27.9.2003, 21.5.2005 and 10.12.2011. The RVS Technology treatment was carried out on 11.3.2003 by applying RVS compound into the oil tank that locates ca. 10 m away from the gear. The oil filter was by-passed during the first eight (8) treatment hours. The situation before RVS application was not pictured.

The pictures show that no changes have taken place on the teeth within the almost ten (10) years period. No traces of wear were detected in the last inspection, 2011. This proves that the TriboCeramic surface is solid and permanently integrated to the contact surfaces of the teeth. The cost of the RVS treatment, year 2003, was ca. 12,000 Euro.

27.09.2003, the "motor side" gear



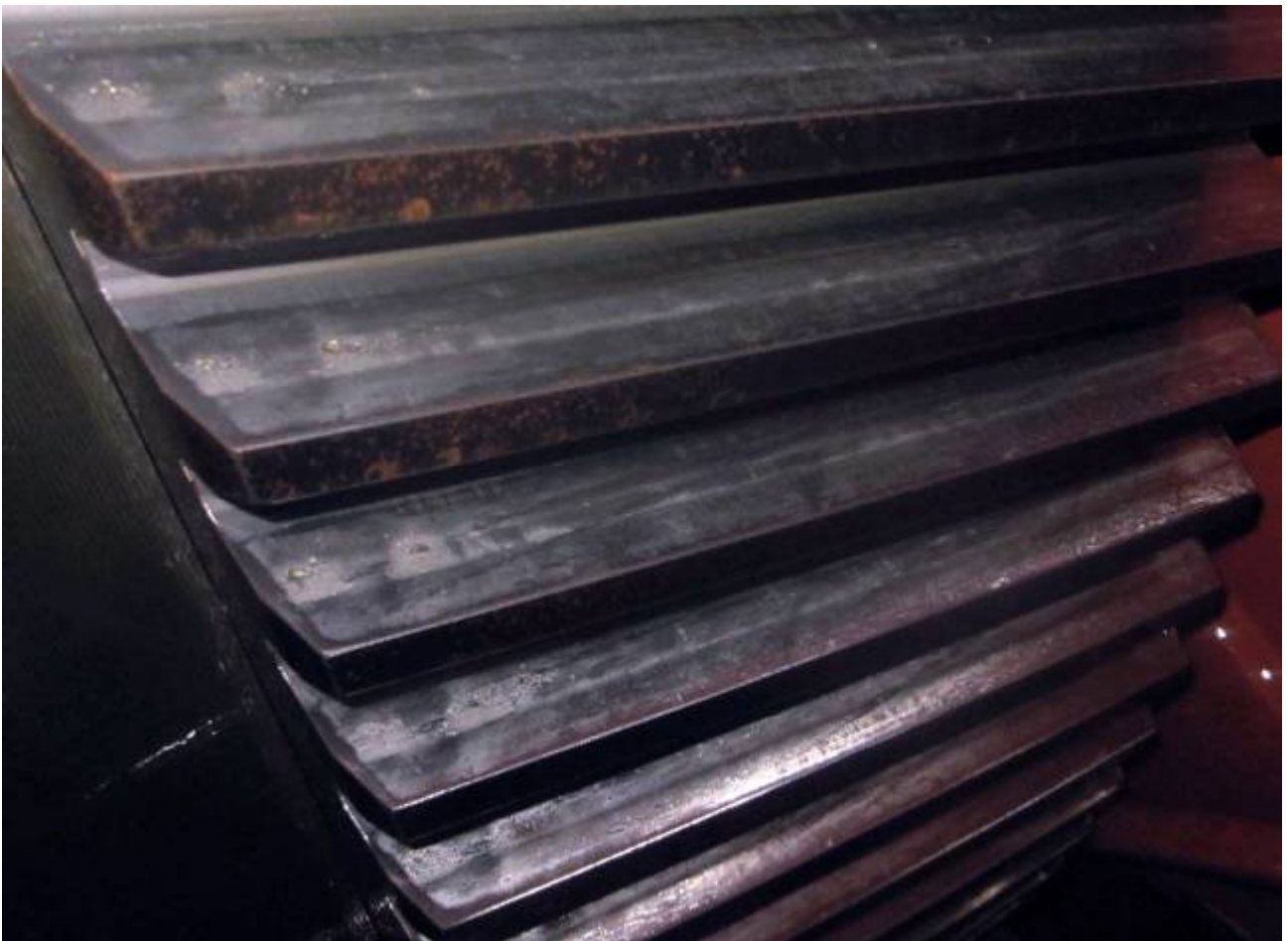
21.05.2005, the “motor side” gear



21.05.2005, the “motor side” gear



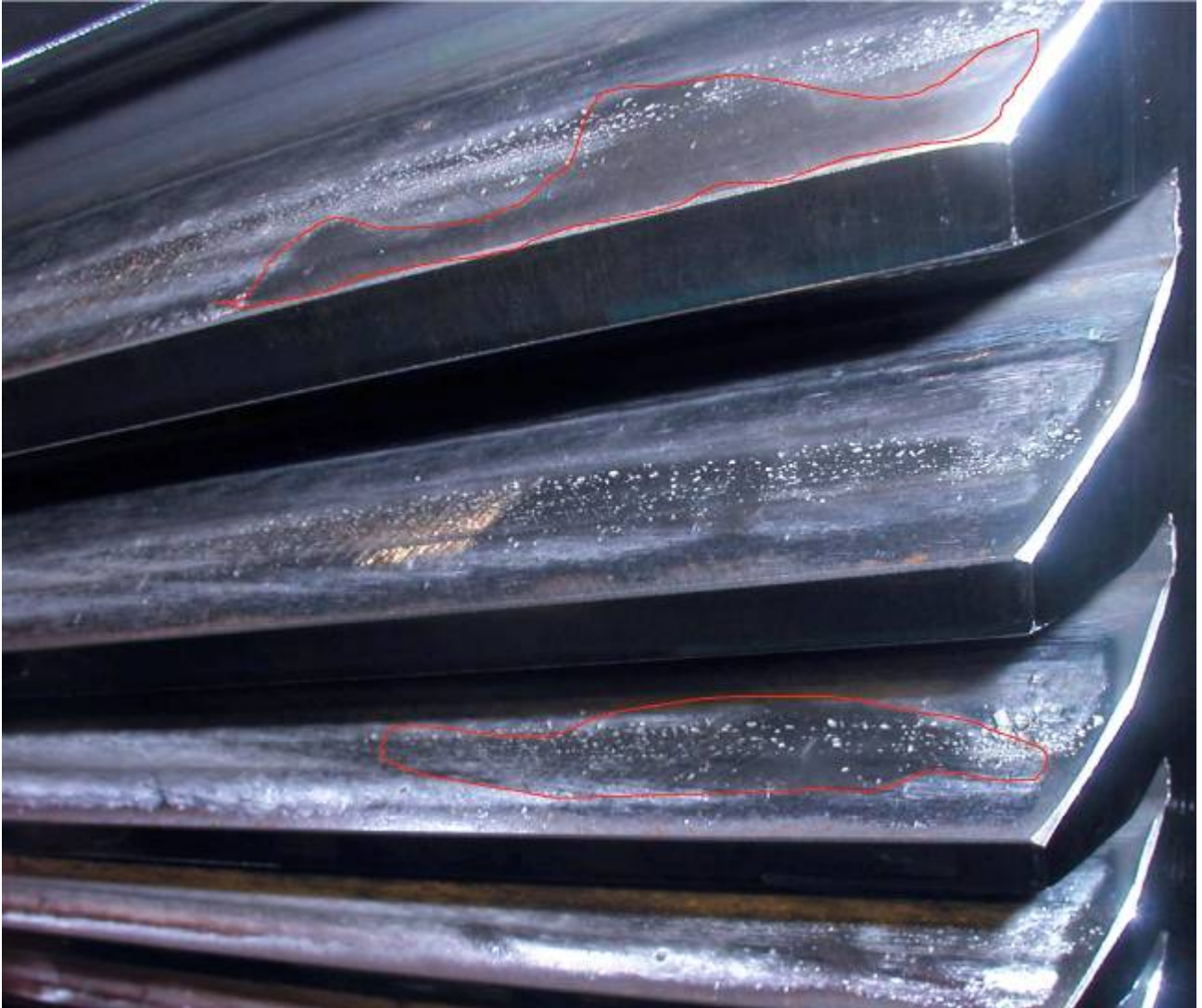
10.12.2011, the “motor side” gear



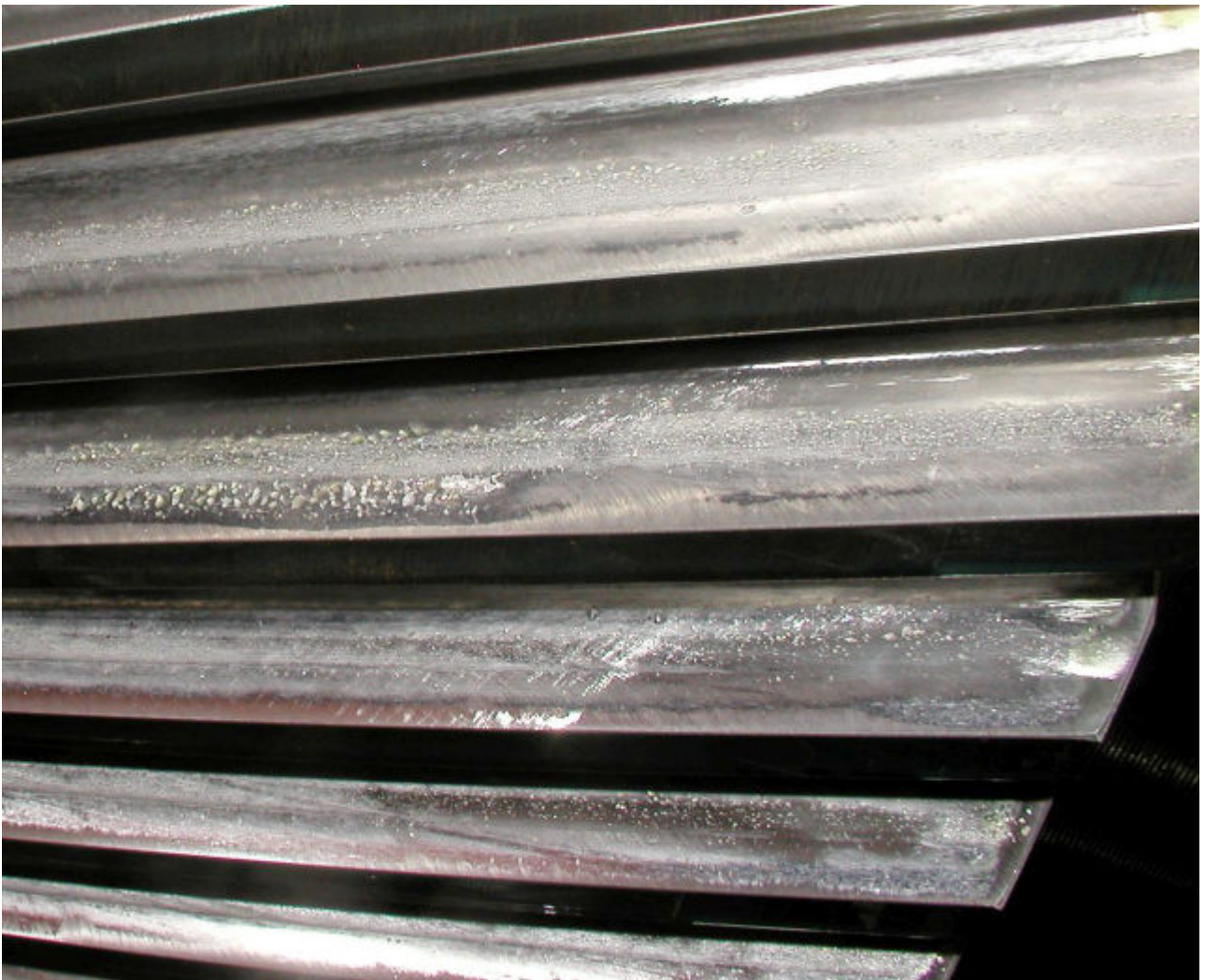
10.12.2011, the “motor side” gear



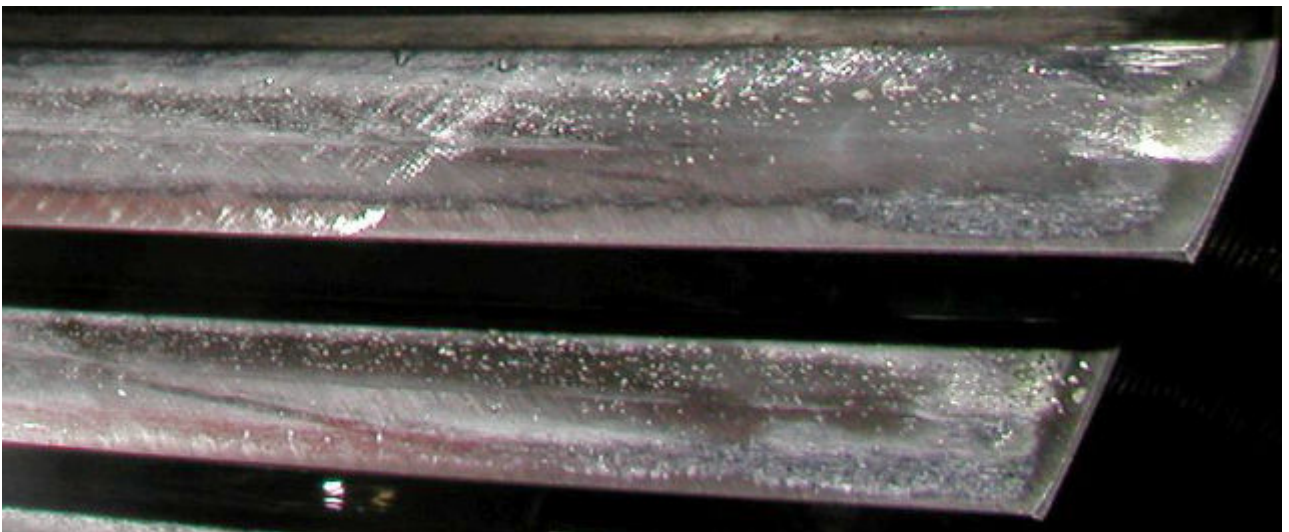
27.09.2003, the “roller mill” side gear



21.05.2005, the “roller mill” side gear



21.05.2005, the “roller mill” side gear



10.12.2011, the “roller mill” side gear



10.12.2011, the “roller mill” side gear

