

Background

Those who do not know the history of applications from special welds to industrial maintenance believe that it emerged in underdeveloped countries as a result of the need and lack of resources to exchange used parts for new ones.

There has been evidence for more than 60 years from North American, German and Swedish welding manufacturers, to name just a few, that apply these techniques and alloys. Not for pleasure welding alloys have been developed so much in our times, not for pleasure a technical maintenance movement has been generated with forums, engineering careers, master's degrees and scientific doctorates, and the only reason, is that it reduces costs industrial maintenance cyclical and processes are becoming more reliable every day from combining welding science with technologies.

Summary

The gear sets installed in the industry have a lifespan of 15 to 20 years. Many have more than 30 years of work, so they are supposed to be replaced with new ones representing a high maintenance cost. The first option to value should be: repair, the second: with whom.

Our engineers, mechanical specialists and welders have experience repairing these expensive parts for over 30 years with excellent results and mostly with high reliability. When we started, we were working with coated electrodes and almost handcrafted tools from those years, but the development of special welding alloys, the digitization with the application of the software to the welding processes and the new generation of Special tools allow to achieve excellent applications with **EXTREME RELIABILITY** with minimal risk.

Technical Justification

The gear sets we refer to have different breaks or failures. The most common is the failure of the molten material caused by misalignment between axles, poor gear distance, lack of lubrication, corrosion pitting formation and crushing of metal in the rolling area of the teeth.

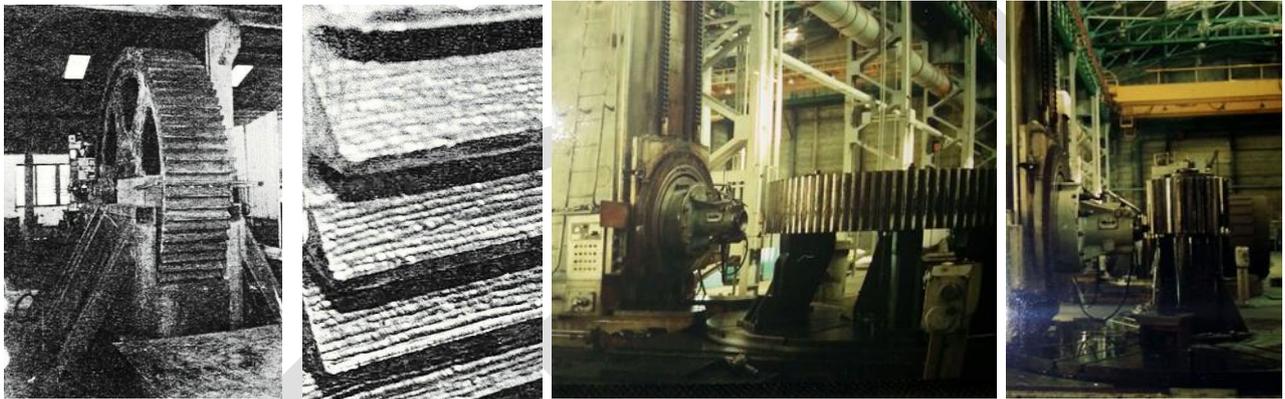
The different alloys used to melt the sprockets and sprockets lead to a technical analysis on each part to be repaired. Alloys in these steels vary by their mechanical, chemical, physical and metallurgical properties, hence the selection of filler materials for welding, welding process, welding procedure, devices and tools auxiliaries will be different in each case to reduce risk, ensure the quality and reliability of the repair.

Reducing Maintenance Costs

For years, for each repair, we have performed an economic analysis as well as the economic effect over the life of the parts, the return on maintenance costs and how this cost reduction favors the maintenance cycle in each industry and in all cases repair vs. buying new is 25% to 50% cheaper, the service life can be increased up to 20% more and the return on maintenance spending is less than 6 months.

Such analyses have been made with international market prices including delivery times, international and domestic transportation, and installation costs among others.

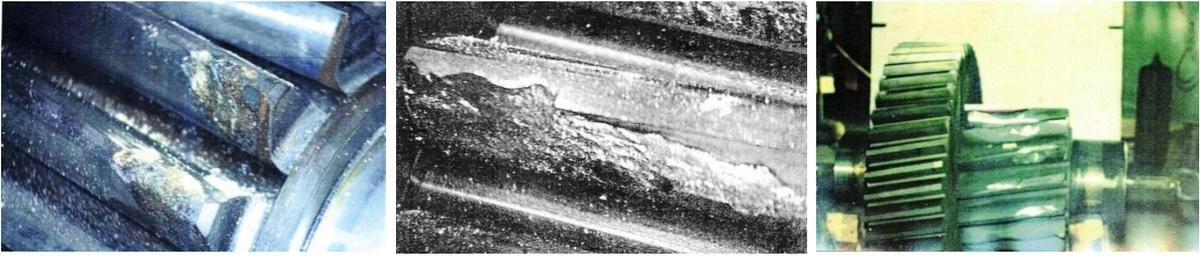
Some experiences



Catalina Repair + Gear Train Pinion with special welds and final finish with shape cutter.



Repair with special welding of sKODA-branded mill reducer pinion with manual abrasive finish.



Repair with special Catalina welds + German reducer pinion brand FLENDER. Repair of teeth that lost the hardness layer (cemented) of more than 60 HRC. Over 60 games repaired.



Repair with special Catalina welds + SKODA brand SKODA brand double helical mill reducer sprocket with 128 fully damaged teeth. Some teeth were devastated to the abrasive-terminated bottom diameter.



Repair with special Catalina welds + Tooth pinion completely damaged by the lamination effect.

Thank you for your time and interest.

Contact us

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