SCHAEFFLER

Schaeffler Global Technology Solutions

Steel and non-ferrous metals

ARMCO do Brasil S.A.,Brazil

Performance Based Contract in the Steel Industry

ARMCO do Brasil is a manufacturer of specialty steel strip products, serving a broad industrial sector of the local and international market in Brasil. To the wide range of products contains for example zinc plated products, dozens of thermal and surface treatments and non pollutant products.

Challenge for Schaeffler

In 2006, ARMCO do Brasil decided to conclude a performance based contract for its São Paulo plant in order to reduce the 874 hours of unplanned downtime (costs: approximately € 50 000/year) as well as the demand for bearings, seals and lubricant (costs: approximately € 500 000/year). This contract was developed by Schaeffler Brazil based on the customer's demand for bearings, seals and lubricant as well as downtime in 2005.

Schaeffler Solution

Schaeffler offered the customer a performance based contract to meet his specific requirements. In 2007, Schaeffler started to provide preventive and predictive maintenance on all rotating equipment and machines at ARMCO's São Paulo plant. First, a CMMS (computerized maintainance management system)was implemented. In addition, Schaeffler experts provided bearing maintenance training for the customer's maintenance team. The contract came into effect in January 2007. In order to develop their own know-how, ARMCO employees receive training in bearing mounting, laser alignment, lubrication and further aspects related to rolling bearings twice a year.

ARMCO

Technical Information about the Plant
Multi purpose four-high reversing cold rolling stand built by Schloemann Siemag AG
Sheet thickness:
0,10 to 6,30 mm
Sheet width:
220 to 425 mm
Rolling speed:
500 m/min
Rolling load:
Approx. 20 000 kN
Back-up roll dimensions:
440 x 1000 mm
Power:
630 kW (1250 A) per electric motor

LuK INA FAG

Measuring device for offline vibration monitoring FAG Detetor III

Vibration diagnosis is the most reliable method for indentifying damage at an early stage

Schaeffler experts support installation of measuring devices and analysis of data

Customer Benefit

Saving potential:	
Reduction in the cost of bearings, seals and lubricant (first year of contract):	from € 500 000 to € 455 000
Reduction in unplanned downtime cost (first year of contract):	from € 50 000 to € 30 000
Savings after the first year projected in the performance based contract:	€ 52 000
Savings after five years projected in the performance based contract:	**€ 210 000**

Technical Information about the Solution
Online condition monitoring system:
16-channel FAG DTECT X1 (only for two rolling stands: LA27 and LA30)
Offline condition monitoring system:
2 FAG Detector III (for all other machines and equipment) Additional Schaeffler products, e.g. rolling bearings, lubricants etc. that are replaced in the course of the regular maintenance and repair activities.

What‘s special

A performance based contract ensures that the customer has to pay only a fixed price if a jointly agreed performance is provided. But at the same time, this type of contract includes a bonus/malus provision. That means: if the agreed targets are fallen short of, both parties to the contract share the cost of the failure to perform. If, on the other hand, the targets are exceeded, both parties will benefit. Similar contracts are of interest to customers in nearly all industries and around the world.

GTS 0050/ 01 / GB-D / 201306