

## Schaeffler Global Technology Solutions

### Raw material extraction and processing

#### Compania de Minas Buenaventura, Peru

#### Professional Bearing Mounting in Tube Mill

Established in 1953, Compania de Minas Buenaventura is one of the leading Peruvian companies in the mining industry. The four main areas of activity are mining, processing, development and exploration of gold, silver and other metals. One of its seven operations is the plant in Uchucchacua. The plant was founded in 1975 and is located at an altitude between 4 000 and 5 000 metres above sea level. The main products are zinc, silver and lead.

#### Challenge for Schaeffler

The customer purchased a used tube mill which was delivered in single pieces. The delivery contained – amongst others – four new FAG spherical roller bearings with an outer diameter of more than 1,5 meters. The mounting of such bearings is very complex. Incorrect mounting or damage to the surrounding components can cause compounding downtime losses. The customer had no experience in mounting of large size bearings and therefore asked Schaeffler for support.

#### Schaeffler Solution

Experienced mounting experts of the Schaeffler Technology Center in Sorocaba worked closely together with the contractors engaged by the mill operator. As a team they defined and implemented a bearing mounting approach. The method applied is field-proven. In addition Schaeffler mounting specialists provided detailed information about the procedure to ensure that the bearings were properly mounted on the trunnions.



#### Technical Information about the Plant

Tube mill type for ore processing  
(trunnion supported)

Diameter:

approx. 3,66 m

Length:

approx. 6,1 m

Drive Power:

1500 KW

Speed:

16 RPM

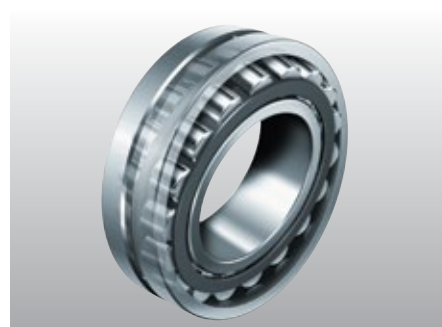




For mounting of large size bearings expert knowledge and expert tools are required



Schaeffler provided professional mounting



FAG spherical roller bearings are designed for high loads

## Customer Benefit

Due to the competent support provided by the Schaeffler experts, the bearings were mounted quickly and effectively. In this way the customer reduced the risk of unplanned bearing failures caused by mounting mistakes. Such failures can result in a downtime of the tube mill of two to three days and, as a consequence, in production loss. The downtime costs of a tube mill amount to approximately 10 000 euros per hour.

Saving potential	
1 day (= 24 hours) costing € 10 000 per hour:	€ 240 000
2 days costing € 10 000 per hour:	€ 480 000
3 days costing € 10 000 per hour:	€ 720 000
<b>Cost saving for each avoided downtime:</b>	<b>€ 720 000</b>

## What's special

To do this excellent job, the Schaeffler engineering team in Peru was supported by Schaeffler's Competence Centre for grinding mills (ASB Competence Centre) headquartered in Melbourne, Australia. This good teamwork shows the close relationship of Schaeffler's experts worldwide and its great industry specific experience in the mining industry.

### Technical Information about the Solution

#### Locating and floating bearings:

FAG SRB 239/1180-B-K-MB-C3

#### Bore diameter:

1 180 mm

#### Outside diameter:

1 540 mm

#### Width:

272 mm

#### Mass:

1 400 kg

#### Lubrication:

FAG Arcanol LOAD 400