

## One-stop supplier for sealing technology

Information EN10101



### The refinery

The Sohar Refinery was built with state of the art technology to process a mixed feedstock of crude oil and atmospheric residue from Oman Refining Company since 2006. This feedstock is transported to Sohar Refinery via dedicated 24 inch diameter, 266 km long pipeline. The refinery has besides an atmospheric distillation unit with a capacity of 116,000 bpd (barrels per day), a residue fluidized catalytic cracking (RFCC) unit, a LPG merox unit, a gasoline desulphurization unit and also a deep desulphurization unit. The refineries output for export includes fuel oils, gasoline, LPG, naphtha, gas oil and kerosene.

In 2007 the government of Oman merged the "Oman Refinery Company" (ORC) with "Sohar Refinery Company" (SRC) to create a competitive world class refining company in the Sultanate. Since then the merged entity is named "Oman

Refineries and Petrochemicals Company" (ORPC) with a combined capacity of about 222,000 barrels per day (ORC 106,000 bpd + SRC 116,000 bpd).

### Service contracts

In 2006 EagleBurgmann received its first big order for mechanical seals from Sohar Refinery. To enable a quick support to the customer, EagleBurgmann Middle East (EBME) started to stock spare parts in its Dubai service centre. After successful commissioning and reliable support of EagleBurgmann, the first service contract in the frame of our comprehensive TotalSealCare™ service concept was signed.

Because the cooperation between EBME and Sohar Refinery got stronger, the seal manufacturer decided to set up a seal repair service centre directly in Sohar, very close to the refinery in

December 2007. As the customer was very satisfied, especially with the performance of EagleBurgmann mechanical seals and the after sales service, a long term seal repair contract was signed by the two parties, valid for 3 years.





### Mechanical seals for pumps

The Sohar Refinery complex is equipped with approximately 320 pumps in total. With a share of ca. 60 %, EagleBurgmann is the main mechanical seal manufacturer of the plant. EagleBurgmann Middle East is responsible for several hundreds of installed mechanical seals ranging from Cartex®-DE, H75, MFLWT80, MFL85N to SH types. These seals are running in 188 pumps from Sulzer, Ebara and KSB and are mainly installed in process areas, utilities and tank farm areas of the refinery. To ensure the maximum lifetime of seals, our supply system types according to API plan 23 and 52 have been selected carefully from our application engineers.



### Mechanical seals for compressors

EagleBurgmann is not just the leading manufacturer for pump seals within the plant, there are also several other machines fitted with their sealing products. In the gas processing part of the

plant, there are compressors from Ebara installed which are fitted with EagleBurgmann Dry Gas Seals. For example type NF90E is running in a circulation compressor, and type NF953E is installed in a heat compressor.



### Couplings for compressors and pumps

Additionally EagleBurgmann has a good population with its flexible diaphragm couplings for compressors from Ebara and Mayekawa and also for Ebara pumps. In total, there are 22 machines fitted with Model-67, Model-74 and Model-100 couplings.



### Packings and Gaskets

Beginning of 2010 ORPC Sohar Refinery had their first plant turnaround and EagleBurgmann got the chance to participate by supplying Buralloy® heat exchanger and equipment gaskets as well as

Spiraltherm® spiral wound gaskets. Various metal types like soft iron, SS316, SS304, SS410, F5, Monel® and even Titanium was used to produce the semi-metallic gaskets. Cut gaskets made of Burasil® fiber sheets and Statotherm® graphite sheets were also supplied. Due to a very good co-operation between ORPC engineers and EagleBurgmann Middle East Packings and Gaskets team, more than 700 gaskets have been supplied on time.

### Relationship to the customer

Due to reliable performance of our sealing products in several refinery units and frequent customer visits of EBME to the customer, EagleBurgmann received an additional order to retrofit approximately 40 ACME pumps in offsite and utility units. The original seals have been component type rubber bellows seals of an Asian competitor. The pumps are processing a water/sludge mix by ambient temperature and low pressures. EagleBurgmann replaced these seals with Unitex® seals. Compared to component seals, these cartridge seal type has the benefit of easy handling. Since installation, the Unitex® seals are running fine.

Additionally EagleBurgmann received orders for further diaphragm couplings and dry gas seals. This growing success is the result of a good customer – manufacturer relationship, excellent quality of products, service and technical know-how of seal specialists.



الشركة العمانية للمصافي والبتروكيماويات ش.م.م  
Oman Refineries and Petrochemicals Company LLC

Date: 27<sup>th</sup> January 2010

**CERTIFICATE OF EXCELLENT PERFORMANCE OF EAGLEBURGMANN**

In Oman Refineries and Petrochemicals -SOHAR REFINERY, there are 163 pumps of Sulzer and KSB makes in our process area fitted with EagleBurgmann Mechanical seals in accordance with API 682 standards, Elliot Ebara compressors fitted with EagleBurgmann Dry Gas Seals. We also have Ebara pumps and compressors fitted with EagleBurgmann Diaphragm Couplings.

We are very happy with the performance of all the EagleBurgmann products mentioned above as they are very reliable and for long service life.

We have signed a Service Contract for the repair of mechanical seals with EBME and EBME have their Service Centre in Sohar, Sultanate of Oman. We are getting very excellent technical support from EagleBurgmann Middle East (EBME), from their Dubai and Oman offices for the past 4 years.


EBME has provided us specialized training programs on Operation and Maintenance of Mechanical seals and Dry gas seals in their Factories in Germany. They have also provided us hands-on training for our Technicians in their Dubai and Sohar service centers. This has enabled us to work better with these seals in our Refinery Complex.

We believe that EagleBurgmann is the best in terms of the products and services compared to other seals manufacturing companies in our Refinery Complex.

We wish EagleBurgmann Middle East all the best in their future endeavors.

Sincerely,

Don Seong Lee

 Jan. 30, 2010

Mechanical Maintenance Manager

Sohar Refinery

Oman Refineries and Petrochemicals Company



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EagleBurgmann is one of the leading international companies for industrial sealing technology. Our products are used everywhere that safety and reliability are important: In the oil and gas industries, petroleum refining, pharmacy, chemicals, energy, food, paper, water, marine applications, aerospace and mining. Every day, more than 5,270 employees contribute their ideas, solutions and commitment to ensuring that customers all over the world can rely on our seals. Our modular seal service, TotalSealCare™, underlines our commitment to customer orientation and our provision of tailor-made services for every application.

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