



### **ASM GROUP**

#### **Industrial Branch**

- ASM METALOMECÂNICA
- ASM ENERGIA
- ASM EQUIPAMENTOS ETRANSPORTE
- CITERGAZ
- PETROTANK

# Renewable Energy

- ASM INVESTIMENTOS
- ASM RENEWABLES

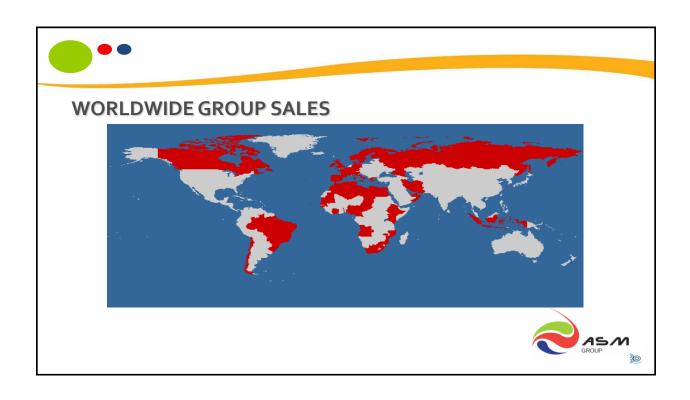




# [2011] Relevant Information:

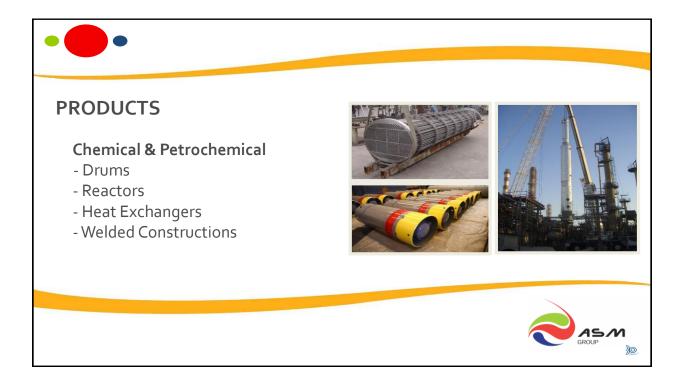
- Group turnover above 50 Million Euros;
- Exports above 60% of annual turnover;
- N.º of Employees: +300;
- Overall number of group companies: 18.
- Total Area: 154.000m²

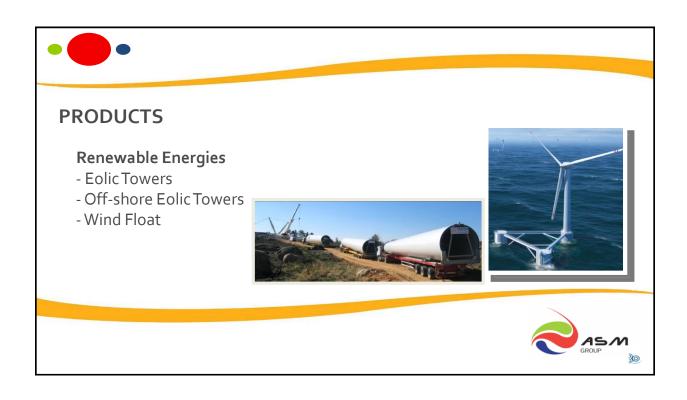


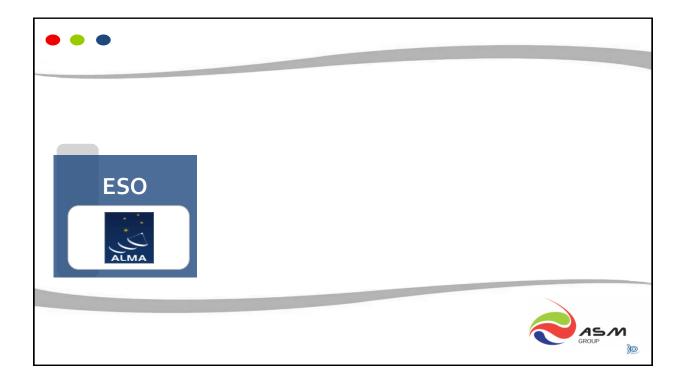














#### **ESO PROJECT**

"Manufacture and Delivery in Chile of LPG Storage Tanks for the ALMA Multi-Fuel Power Generation System"





# **SCOPE OF PROJECT**

Manufacture 3 LPG storage tanks with 206m3, and deliver them to the ALMA site, in the Atacama Desert - Chile.

Tanks to be shipped from Portugal to Chile by boat and then transferred to the OSF (Operations Site Facility) by truck.

Unloading at OSF included.





### **PROJECT DIFICULTIES**

Chilean certification and approval of the tanks

Global certification of the tanks installation

Oversized transport and different means used

Different languages barrier





# **CERTIFICATION**

European Certification (CE mark) was not enough

Tanks had to be homologated by Chilean Local Authoritie:

SEC - Superintendencia de Electricidad y Combustibles

Homologation Procedure:

PC 59 – PROTOCOLO DE ANALISIS Y/O ENSAYOS DE PRODUCTOS DE GAS

Procedure Date: 14 Fev 1995





#### **CERTIFICATION**

SEC homologates imported equipments in two conditions:

- Manufacturer production is certified by a recognized Notified Body
- Equipments are certified by a Chilean Notified Body, upon arrival to Chile

ASM contracted Bureau Veritas Portugal + Cesmec (Chilean Buereau Veritas) to obtain the necessary certification:

- CE Certificate
- -TC8 Certificate: Certificado de Aprobación de Producción Tipo

Cesmec was certified by INN - Instituto Nacional de Normalización





# **PROJECT KEY DATES**

- Preliminary enquiry: May-2010

- Call for tenders: September-2010

- Contract award: December-2010

- Provisional shipping date: June-2011

- Provisional delivery date: July-2011

- FINAL DELIVERY DATE: March-2012

- PROVISIONAL ACCEPTANCE: May-2013





### **PROJECT ISSUES**

Overall Technical Specification

- -Type of installation and fittings definition
- Feed-back from local LPG supplier
- Lack of specific expertise in this particular field

Transport availability

Costumes clearance





# **PROJECT BENEFITS**

Opening of a "new market"

Excellent cooperation between ESO & ASM

ESO expertise in particular and complementary subjects

"Zero" economical risk



