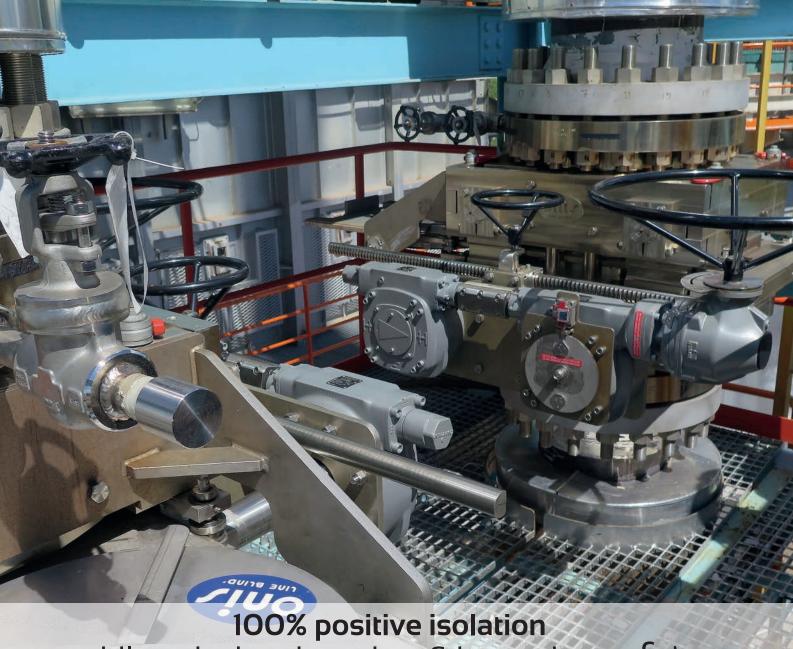
ONIS OUTPERFORMS STANDARD BLIND SOLUTION: SPECTACLE, SLIP AND FIGURE-8 BLINDS



ONIS LINE BLIND FOR PRE-REFORMING PROCESSES



while reducing downtime & improving safety



PRE-REFORMING PROCESSES



18" 600# upstream heater 45bar, 540°C

ONIS Line Blinds allow to:

- Reduce downtime by more than 75%
- Ensure longest production runs
- Guarantee a 100% safe and efficient positive isolation
- Protect catalyst from air poisoning
- Ensure greater operational flexibility
- Maximize safety & flexibility

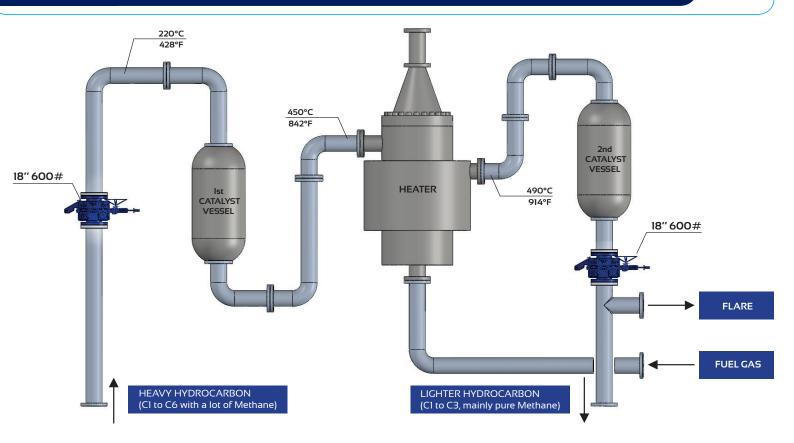
Blinding without ONIS Line Blind is dangerous and time-consuming:

- A single blinding operation **last 6 hours**
- Catalyst lifetime reduced due to long atmospheric exposure
- Human exposure to hazardous gas and high temperature



18" 600# downstream heater 45bar, 540°C

TYPICAL PRE-REFORMER UNIT ON AMMONIA PLANT





PRE-REFORMING PROCESSES

A breakeven point in just a few months through a safer way to blind the whole process

BUSINESS CASE

Qty	Diameter	Rating
2	18″	600 #

• Replacement of **2 Figures-8** (traditional blinding) with **2 ONIS Line Blinds of** 18" on Pre-reformer unit to reduce downtime and increase plant safety and profitability.

• A blinding operation is required **every 1 year**.



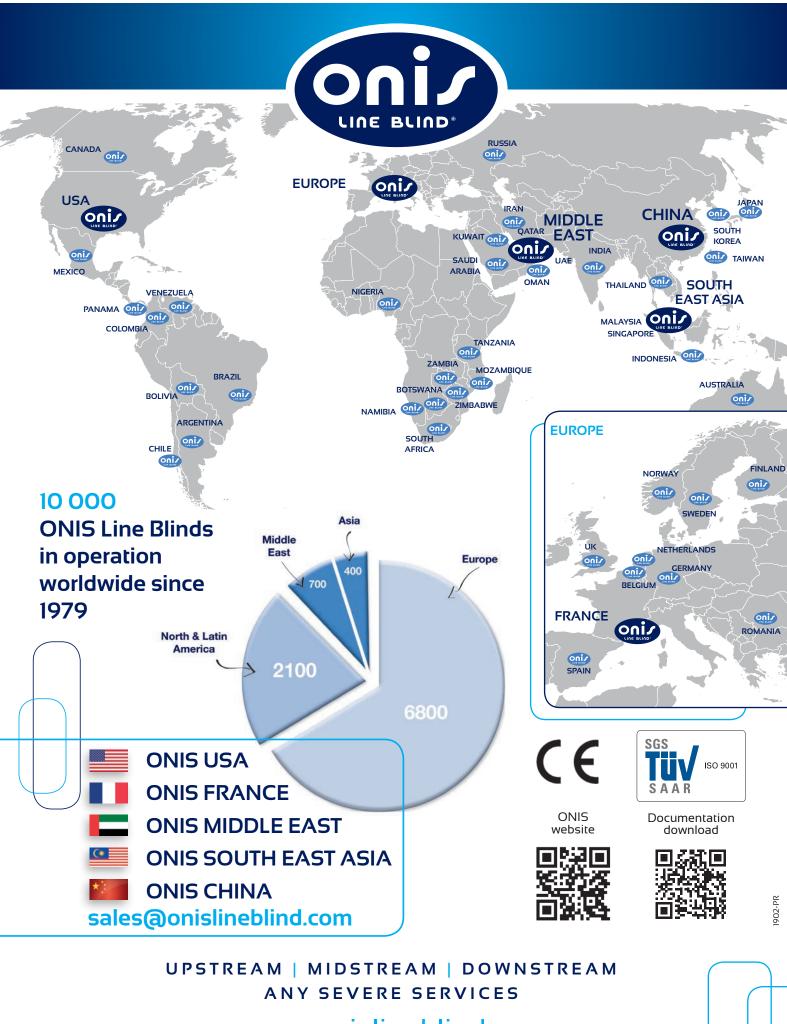
Traditional blinding **ONIS Line blind** Benefits ''Figure-8'' Staff 6 2 4 men exposure \oplus **SAVED** Catalyst loss due to long atmospheric exposure Tools Many tools, cranes... Zero tool Hazard and hassle SAVED Operating time (blinding / unblinding) 24 hours 2 hours 22 hrs of production SAVED \$336K \$28K Loss due to downtime \$608K SAVED Catalyst loss* \$300K Equipment cost Cost of Figures-8 included \$565K **PAY-BACK PERIOD = 1 YEAR**

YOUR LINE BLINDS PAID IN 1 YEAR OR LESS

Some of our references

Company	Area
BP	USA
Celanese	USA
Fostfertil	Brazil
Linde	Russia
Petrobras	Brazil
Petronas - ABF	Malaysia

Safety and Flexibiliy are key to your operations



www.onislineblind.com