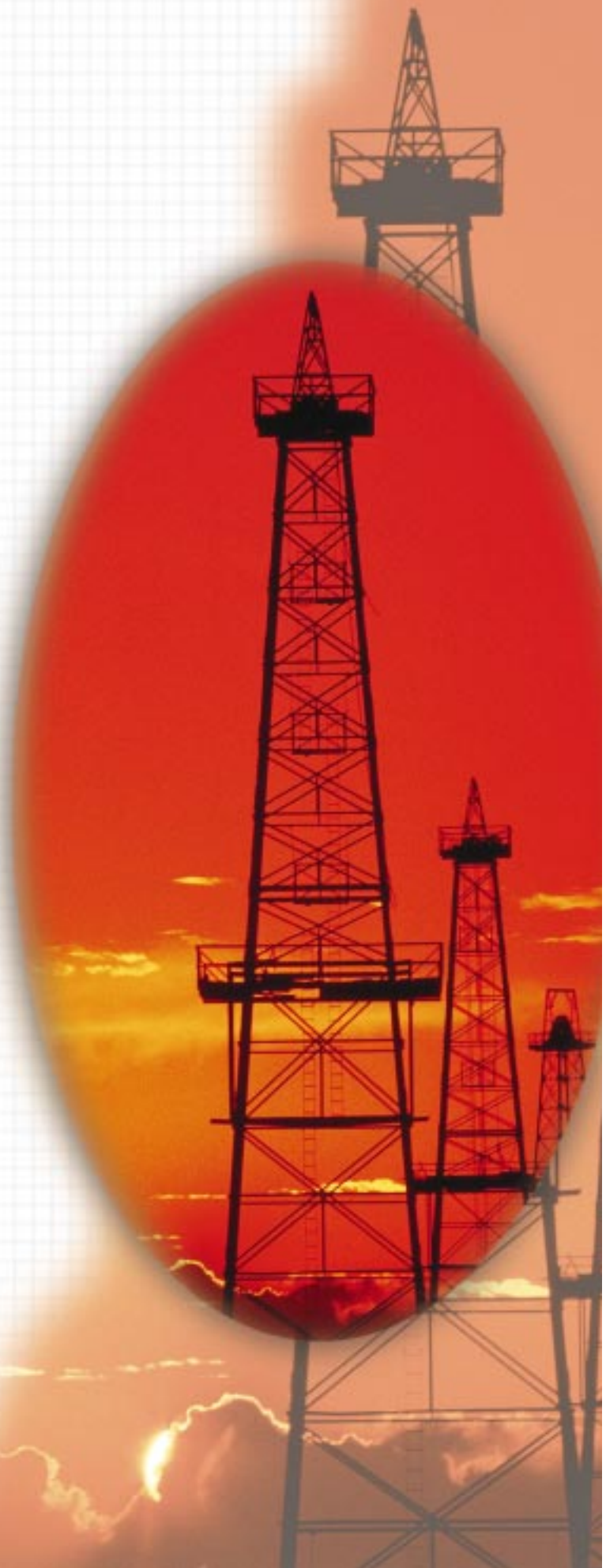




*Bringing Solutions  
to the Surface...  
for the*

# *Oilfield Industry*



## Praxair Leads With Experience and Solutions For the Oilfield Industry

As the world leader for over 45 years in wear-resistant overlays and services, Praxair Surface Technologies, Inc. specializes in providing solutions for the critical wear problems in oilfield operations.

Located in the engineering capital of the oilfield industry, our Houston plant, with our worldwide plant manufacturing network, is best positioned to meet the needs of this industry. Our 27 plants are strategically positioned globally to provide a complete range of advanced coating chemistries by many different systems:

SUPER D-GUN™  
D-GUN™  
HVOF  
PLASMA

LASER CLADDING  
TRIBOMET™  
CVD  
PVD

The UCAR® and SDG™ overlays have been proven cost effective solutions for a wide variety of wear problems associated with critical components utilized in oilfield equipment.

Additionally, Praxair's wear-resistant UCAR overlays meet or exceed all thermally sprayed quality and specification standards established by our customers, the government, API, and ISO.

Our technologically advanced coatings, thermal spray systems and comprehensive finishing capabilities get newly designed products reliably into production and keep existing equipment producing longer on reduced maintenance schedules. There are few wear problems in the Oilfield Industry too large or too small for UCAR products and service consideration.

Praxair Surface Technologies Field Specialists are readily available for consultation. We will examine the details of your application for the most cost effective solution. Continuous improvement is an inherent part of our manufacturing strategies and is maintained through our extensive R & D facilities, backed up by experienced materials and equipment specialists.

## Oilfield Industry Applications

### Wellhead

- Gate Valves
- Blowout Preventers
- Valve-Chokes
- Moyno™ Pumps \*

### Wireline Services

- Gamma & Neutron Logging Tools

### Drilling

- Moyno™ Drill Motors \*
- Shock Absorbers
- MWD (*Measurement While Drilling*)
- Drilling Tools
- Drill Bits \*

### Pipeline

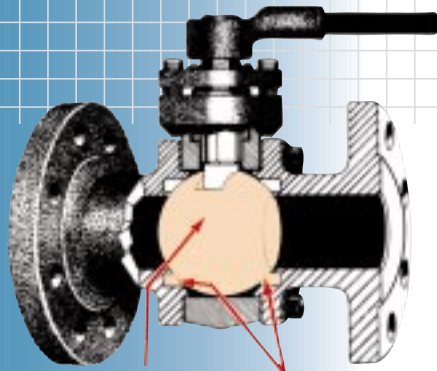
- Inspection
- Rub Shoes

\* Patented Applications



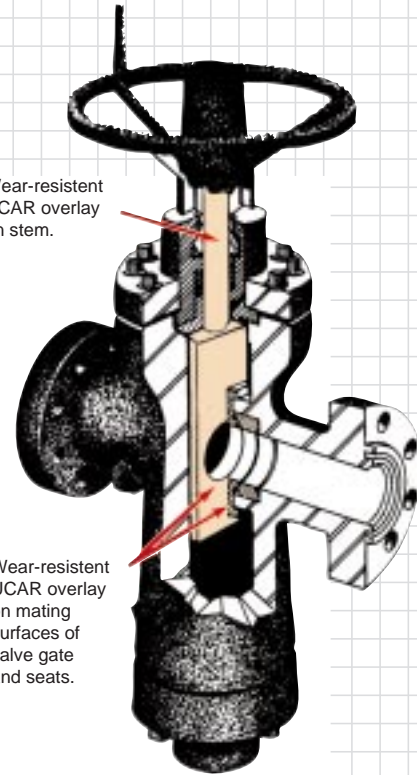
Drill Bits receive an overlay application from Praxair's exclusive detonation gun





Wear-resistant UCAR overlay on O.D. of ball.

Wear-resistant UCAR overlay on sealing surface of valve seats.



Wear-resistant UCAR overlay on stem.

Wear-resistant UCAR overlay on mating surfaces of valve gate and seats.

*Gate valves and ball valves are examples of flow control systems that are subjected to corrosion and wear due to hostile field operating conditions. With Praxair technology and series of UCAR® overlays, maximum performance and longer life can be insured.*

## *How Praxair STI Can Benefit You*

- Cost Effective Solutions
- Exclusive Technology in Automation and Application Systems
- Over 100 Metal and Ceramic Overlays to choose from
- Ancillary Services-Strip and Recoat used parts  
Diamond Grinding  
Diamond Honing  
Diamond Lapping
- Worldwide Technical Support, Sales and Service Locations

*Robotics can be used singularly or in tandem*





## **SURFACE TECHNOLOGIES**

*For more information on these and other oilfield applications, call: 1-800-822-7284 or contact one of these plant locations.*

### **United States**

**9200 Telephone Road  
Houston, TX 77075  
Tel (713) 991-8700  
FAX (713) 991-8707**

**3225 Honeybee Lane  
New Castle, PA 16105  
Tel (412) 658-6678  
FAX (412) 656-1745**

**4101 W. 124th Place  
Alsip, IL 60658  
Tel (708) 371-6790  
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### **Germany**

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4030 Ratingen 2**

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FAX: 65.542.8121**