

YOUR PARTNER IN SCR, CATALYST AND NO_x TREATMENT TECHNOLOGY



**ENGINEERING
& SERVICE**

H+H – KNOW HOW IN SCR SINCE 1992



Pledging itself to this motto, the activities of the International Maritime Organization (IMO) include the pursuit of an ambitious goal: **to reduce and, if possible, completely prevent maritime pollution by ships.**

We are proud of our involvement in efforts to achieve this goal. We provide global support for more than 200 ships and, consequently, over 600 engines with specially-integrated SCR systems. This entails uncompromising expertise and know-how, enormous commitment and the targeted qualification of every individual involved.

Our employees have garnered their know-how over more than a decade of experience in this sector, are trained to recognised NOGEP (Netherlands Oil and Gas Exploration and Production Association) standards and have successfully completed HUET (Helicopter Underwater Escape Training).

Effectively-networked service centres and partners around the globe simultaneously ensure maximum flexibility and the shortest response durations at all times.

Draft

DRAFT

Planning, engineering

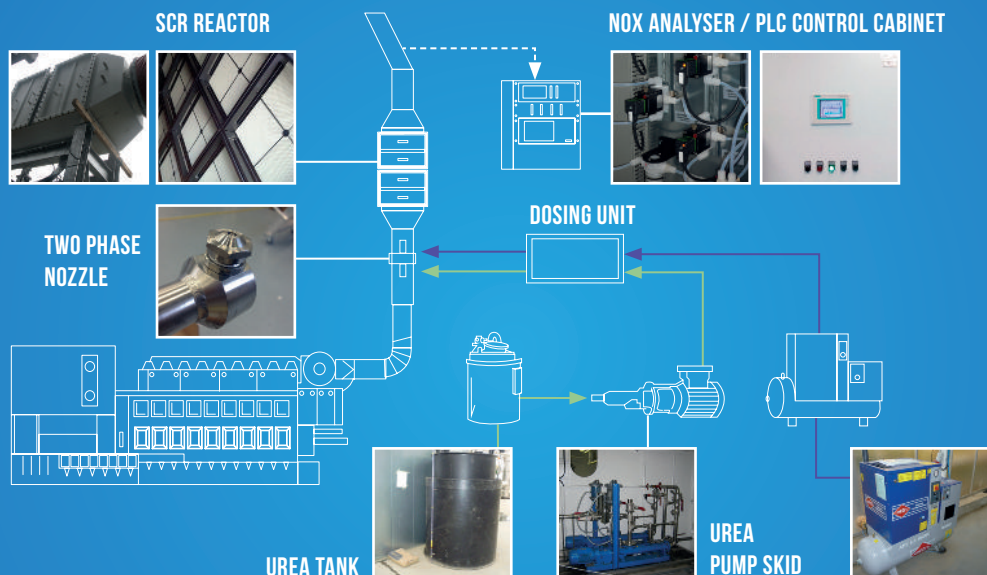
PLANNING, ENGINEERING

Commissioning

COMMISSIONING

Service, maintenance

SERVICE, MAINTENANCE



CONTINUED IMPROVEMENTS BY H+H

Projects Commissioning Service References

1992

First Dual Fuel Project, NL, 8 MW Pielstick engine
Turn Key - CHP for the Reichstag (German parliament building)

1997

First Military Vessel - HMS Carlskrona, Sweden
MS Visby / MS Thjelvar – Reederi Gotland

Mobile installation on power trucks for
Caterpillar Rental Power (75 units)

SCR for gas turbine, Yokosuka Power in Kanagawa, Japan

2002

Macao Power Plant – 230 MW 2 stroke engines, installation of SCR
before turbo charger

HSC Gotlandia I + II; MS Birka Paradise; Staten Island Ferry;
Silja Europa

Training program for operators of SCR systems

Clean Design - optimized urea consumption with different
NOx target values outside ECA zones

2007

Clear Maintenance instruction with wear part sets for 2 year operation time

NOx reduction counter - live counter to see kg NOx reduced

ICP - intelligent catalyst protection - prevent catalyst clogging
in low load operation (DP mode)

Silencer elements - can be used when catalyst is not needed

2014

Datalogger for NOx reporting

Commissioning of 250 SCR systems - 750 engines

TO BE CONTINUOUS...

an excerpt from references:

CARGO: Wilson Line | Reederei Braren...

CRUISE: Europa II | Fjord Line | Stena Line | Gotlandsbolaget ...

FISHING: Strand Rederi | Liegruppen | Teigenes...

OFFSHORE: North Sea Shipping | Farstad | DOF | Østensjø

Siem Offshore | Havila | PGS | Volstad | Remøy...



Service Locations North America

- Subsidiary: AeriNOx Denver CO, USA
- Partner: DCL International - Canada



SERVICE



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SOLUTIONS & SERVICE BY INTERNATIONAL NETWORK

Maintenance and after sales service for exhaust gas cleaning systems with service partner located in the Netherlands, Norway and North America

- ▶ Supply network of spare parts (catalysts, pumps, valves...)
- ▶ Function tests and commissioning
- ▶ Adjustments and optimization of existing plants before and during certification procedures
- ▶ Improvement of software and programming of PLCs
- ▶ Online monitoring of analyzer and PLC unit via Ethernet
- ▶ Specific Training for Operators and Customers
- ▶ Regeneration of catalysts
- ▶ Catalyst Analysis (Activity, Pore Structure, Chemical Poisoning)
- ▶ Catalyst Management Plans (exchange and reloading strategies)

24/7

Customer Support



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