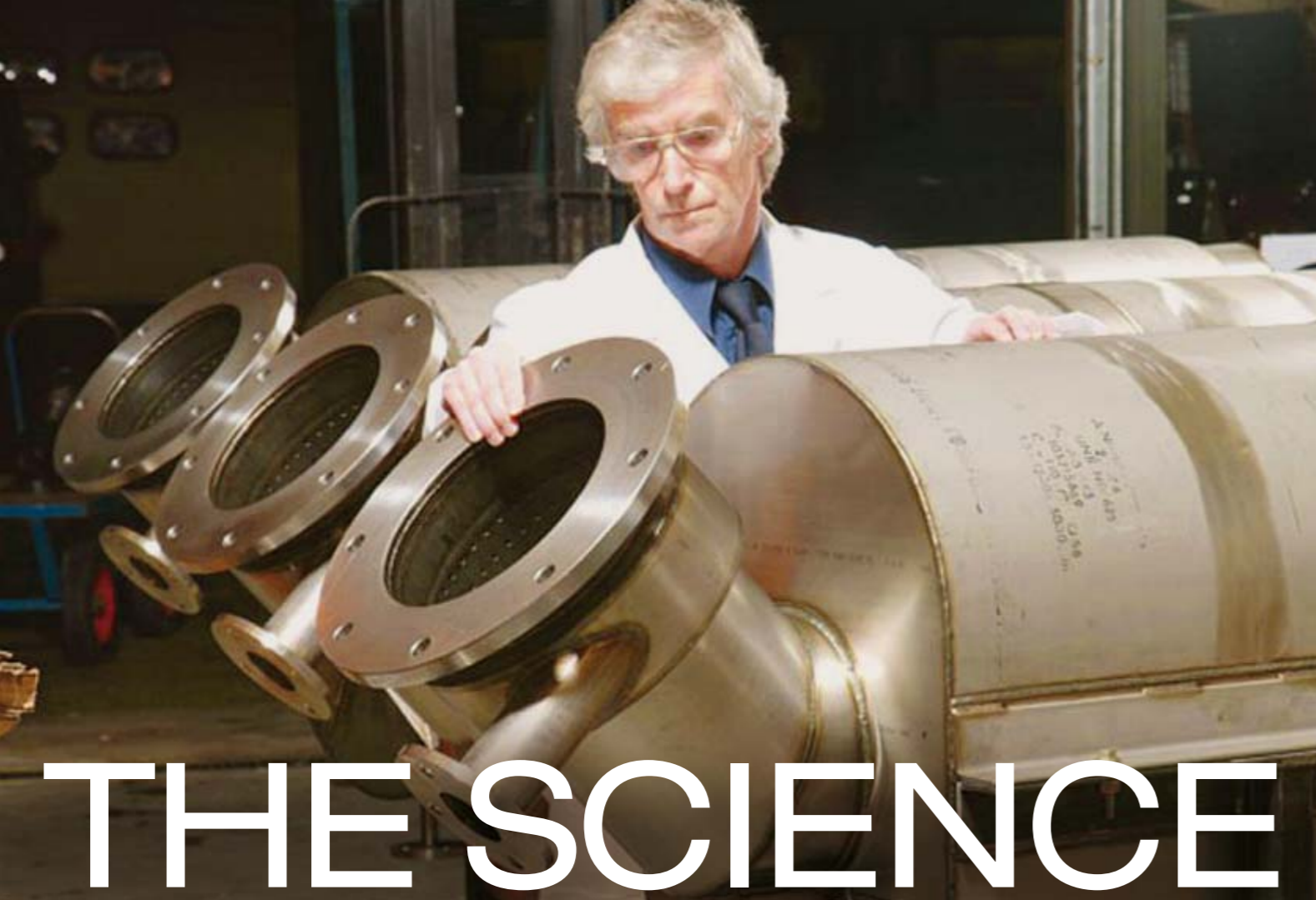




THE SCIENCE OF SILENCE



Marine Exhaust Systems



THE SCIENCE

Oma Baatbyggeri, Norway



Tideekspress ferry

SILENCE IS GOLDEN

Oma's 33m ferry carries 300 passengers at 38 knots, using four 810kW engines. Noise is paramount with 300 people, so Oma Baatbyggeri once again asked Halyard to design and manufacture the GRP dual chamber silencers, the stainless steel exhaust risers and water injection systems, also using Halyard's unique Lloyds Approved silicone flexible bellows to minimise vibration between the two – significantly reducing noise levels and meeting the engine manufacturers back pressure requirements.

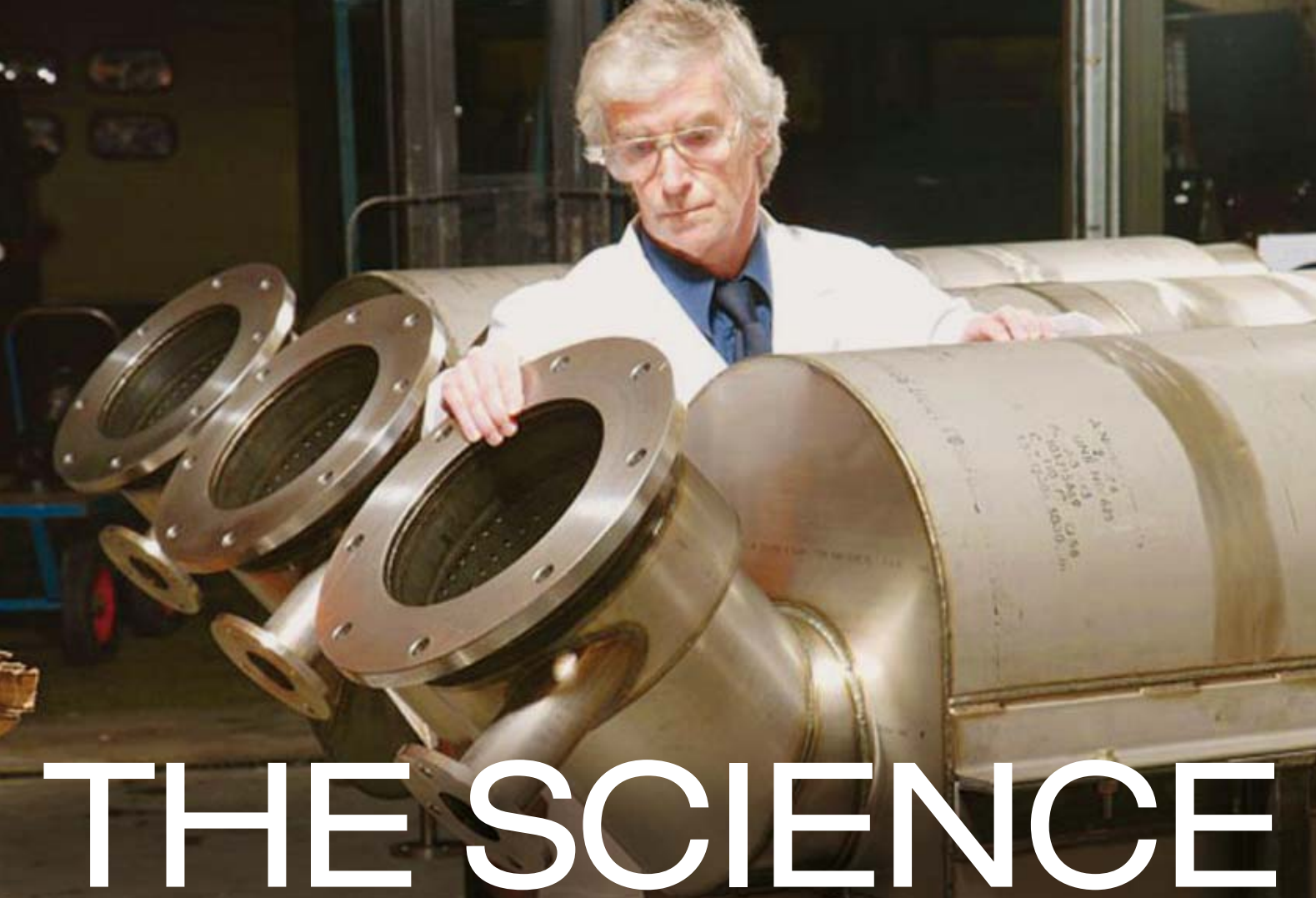


THE QUEEN'S AWARD
FOR ENTERPRISE:
INNOVATION
2008

OF SILENCE



HALYARD Specialists in designing and manufacturing marine exhaust systems for craft from 10m to 100m, with an international reputation for excellence in both water-cooled and dry exhausts



THE SCIENCE OF SILENCE



Oma Baatbyggeri, Norway



Tideekspress ferry

SILENCE IS GOLDEN

Oma's 33m ferry carries 300 passengers at 38 knots, using four 810kW engines. Noise is paramount with 300 people, so Oma Baatbyggeri once again asked Halyard to design and manufacture the GRP dual chamber silencers, the stainless steel exhaust risers and water injection systems, also using Halyard's unique Lloyds Approved silicone flexible bellows to minimise vibration between the two – significantly reducing noise levels and meeting the engine manufacturers back pressure requirements.



Silicone Manufacture

Noise from marine engines causes crew fatigue, and annoyance to those ashore or on nearby craft. Minimising noise, while meeting the technical requirements of today's high speed diesel engines, is technically challenging and demands extensive specialist knowledge.

Enter Halyard. A committed team of specialists with a 30 year track record, designing and building marine exhaust systems for the most demanding craft in the world. Five design staff with more than 20,000 marine exhaust systems behind them. Six sales specialists with experience on military craft, pilot boats, support vessels, lifeboats, ferries, fishing boats, yachts and superyachts. Sixty manufacturing staff in three specialist

factories building stainless risers and water injection systems, filament winding GRP tube and constructing silencers for water cooled exhaust systems, building steel silencers for use in dry exhaust systems, making specialist silicone exhaust couplings, and manufacturing nitrile rubber marine exhaust hose. Total integration in one specialist business with design control and manufacture of each major component in-house.

We tailor our involvement to your needs linking electronically with the latest in 3D CAD and one of Europe's most sophisticated drawing control systems. We download your machinery drawings and add the exhaust system, refining this until it's perfect for the need. Or we



Bespoke GRP silencer for 1800hp V engine



Stainless engine riser system

can fly in, design and pattern on site and produce detailed drawings for approval.

Then we'll project manage the manufacture right through to despatch. A complete package containing everything ordered for the entire exhaust system, with traceability on each component and classification society approval where agreed.

And finally, our after sales support includes a qualified project team, helping remotely during the installation, or on-site if the need arises. And a design archive system allowing customers, years later, to repeat an installation or use a previous system to model a new requirement.

Halyard. The science of silence.



De Haas Maas Luis, Holland.



24m patrol craft exhaust system

DELIVERING HIGH STANDARDS

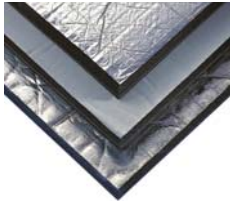
One of ten new patrol boats designed for use in Holland, these 24m craft are fitted with twin 650kW engines. Low noise levels are crucial for the crew on long patrols. Halyard designed and built both the stainless steel exhaust risers and water injection systems, plus the GRP dual chamber silencing system, meeting clear back pressure limits and noise levels. The result – "Exhaust systems from Halyard have proven to be the best fit to comply with our design philosophy. The clean and efficient design of the system enables us to deliver patrol vessels of the highest standard. The noise reduction ensures a safe and sustainable work environment for the crew on Dutch waters.", Ruben Kalisvaart

OTHER PRODUCTS



Overheated exhaust?

Halyard's Exhaust Alert system puts a temperature probe directly into the exhaust gas flow, telling the crew immediately if the cooling water supply fails.



Engine noise?

Halyard is the UK's largest manufacturer of engine room noise insulation material, with a wide range of types and finishes to solve differing problems.



Oily bilge water?

Halyard's Wavestream bilge filter fits neatly into the pumped system and takes oil out of bilge water, allowing clean and pollution free discharge.



Structure borne engine noise?

Halyard's Aquadrive system puts free movement between engine and shaft, allowing softer mounts to function fully and avoiding the need for accurate engine alignment. Up to 90% of structure borne noise is removed.



Halyard (M&I) Ltd

Whaddon Business Park, Southampton Road, Whaddon, Salisbury, Wiltshire, SP5 3HF, United Kingdom
Tel: +44 (0)1722 710922 Fax: +44 (0)1722 710975 E-mail: techhelp@halyard.eu.com Web: www.halyard.eu.com

**SPECIALISTS IN NOISE AND
VIBRATION CONTROL SYSTEMS**