

INTERSPILL LONDON MARCH 2012

NEW DEVELOPMENTS IN MARINE AND AERIAL DISPERSANT SPRAY SYSTEMS

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Managing Director

AYLES FERNIE INTERNATIONAL

NEW DEVELOPMENTS IN MARINE & AERIAL DISPERSANT SPRAY SYSTEMS

- 1. THE AFEDO™ NOZZLE**
- 2. CLEARSPRAY - ABS DESIGN APPROVAL
- FULL BRIDGE CONTROL**
- 3. SEASPRAY 100 - OLD NAME/NEW CAPABILITIES**
- 4. BOOMVANE SPRAY SYSTEM DEVELOPMENTS**
- 5. THE NEXT GENERATION OF AERIAL SPRAY SYSTEMS?**

AFEDO™ NOZZLE

THE ALTERNATIVE TO DISPERSANT SPRAY ARMS

DISPERSANT SPRAY ARMS DISADVANTAGES

Heavy, Bulky & Expensive



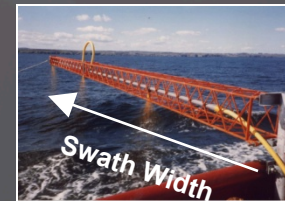
Difficult to Store & Transport



Requires Special Ship Fittings



Limited Swath Width



THE SOLUTION

“AFEDO™ NOZZLE”

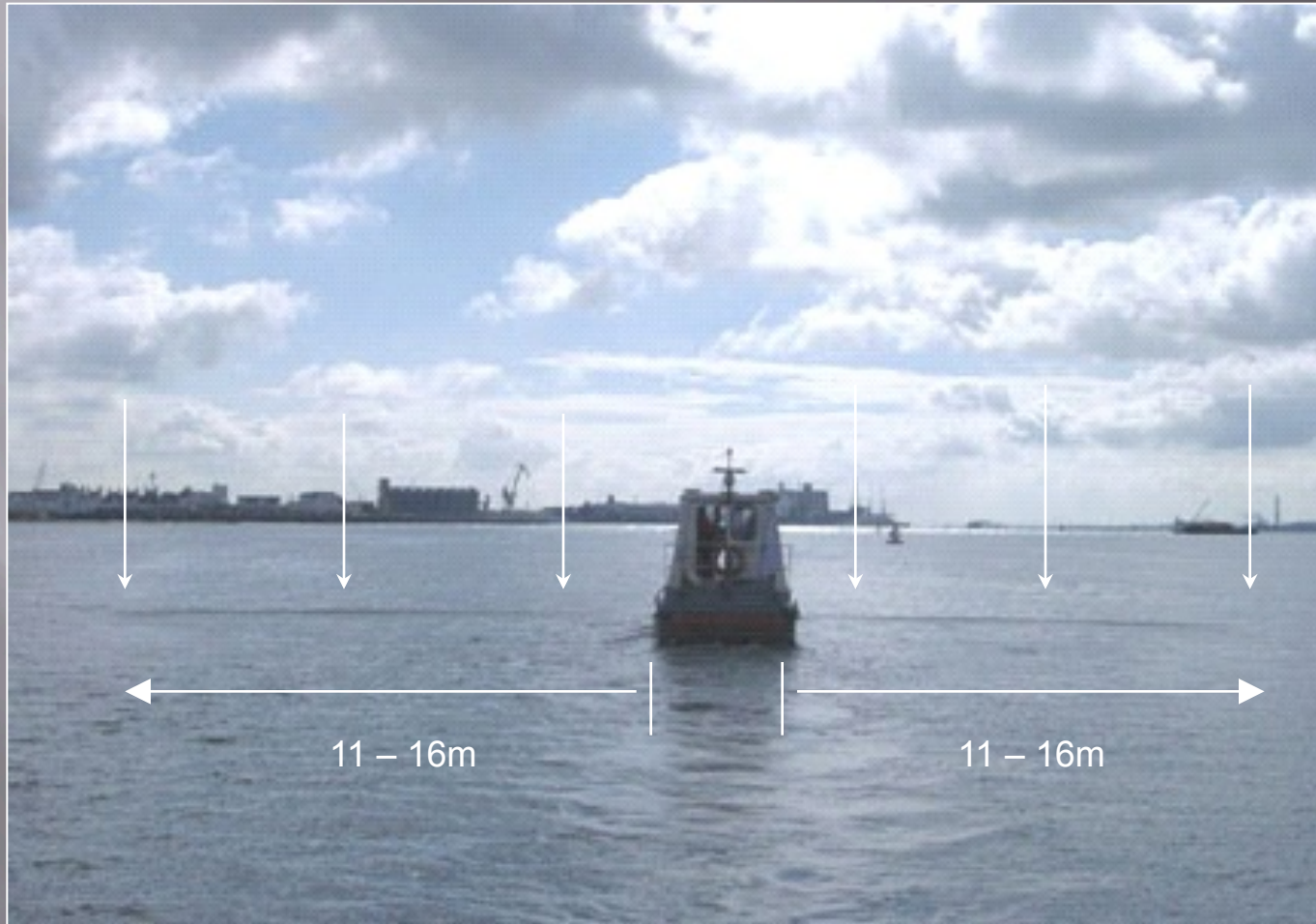


WHAT IS AN AFEDO™ NOZZLE?

A specially developed Nozzle Assembly which
creates an
Even Drop-Out Spray Pattern



EVEN DROP-OUT SPRAY PATTERN



OSRL Trials 2004

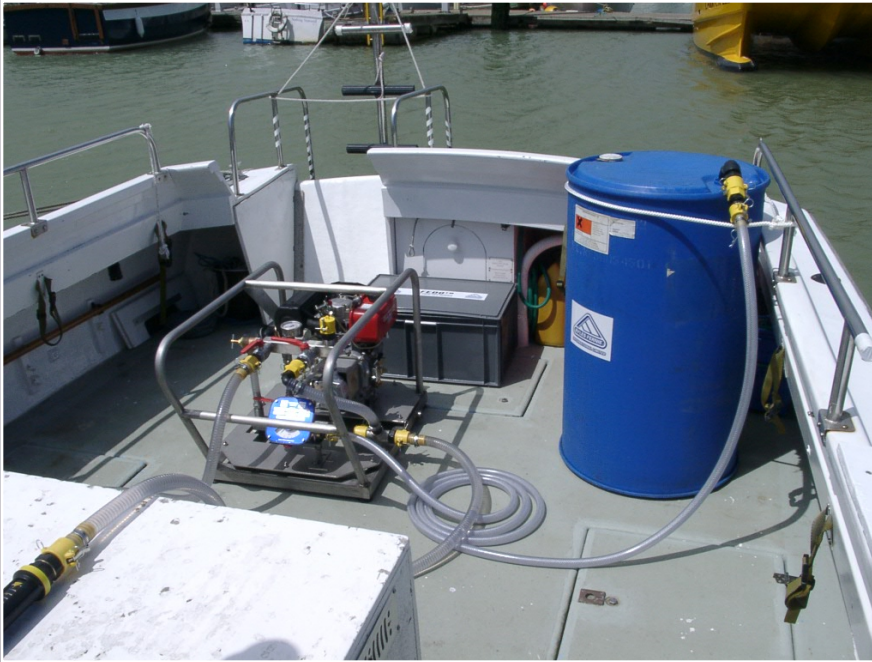
SPRAYING TECHNIQUES



- ACCURATE SETTING OF THE NOZZLE FLOW RATE
- NEAT AND DILUTE DISPERSANT SPRAYING
- SPRAY DOWNWIND MATCHING VESSEL SPEED TO WIND SPEED
- MANAGING THE SPRAY PLUME
- INDICATOR FLAG

BOATSPRAY 50-TS

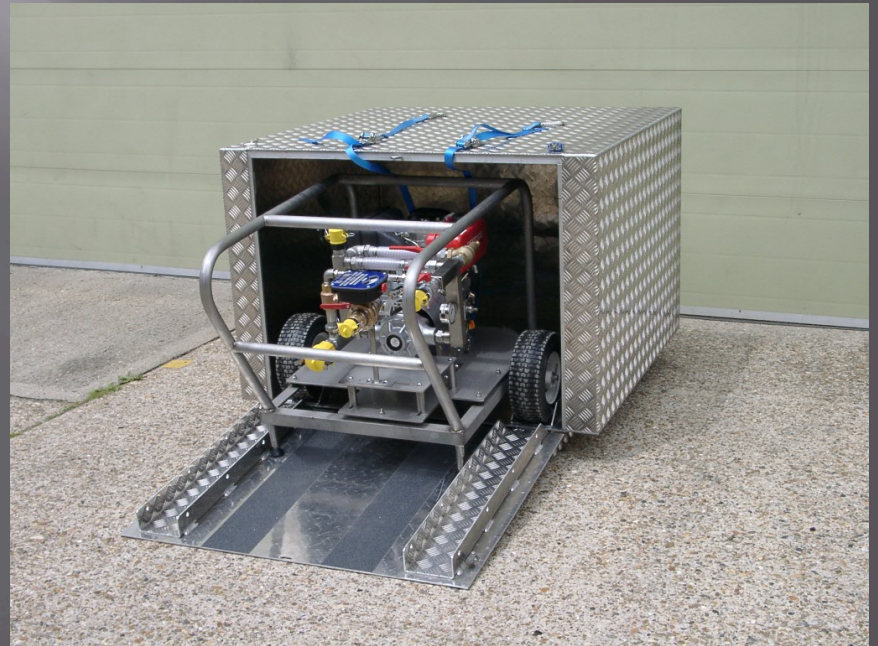
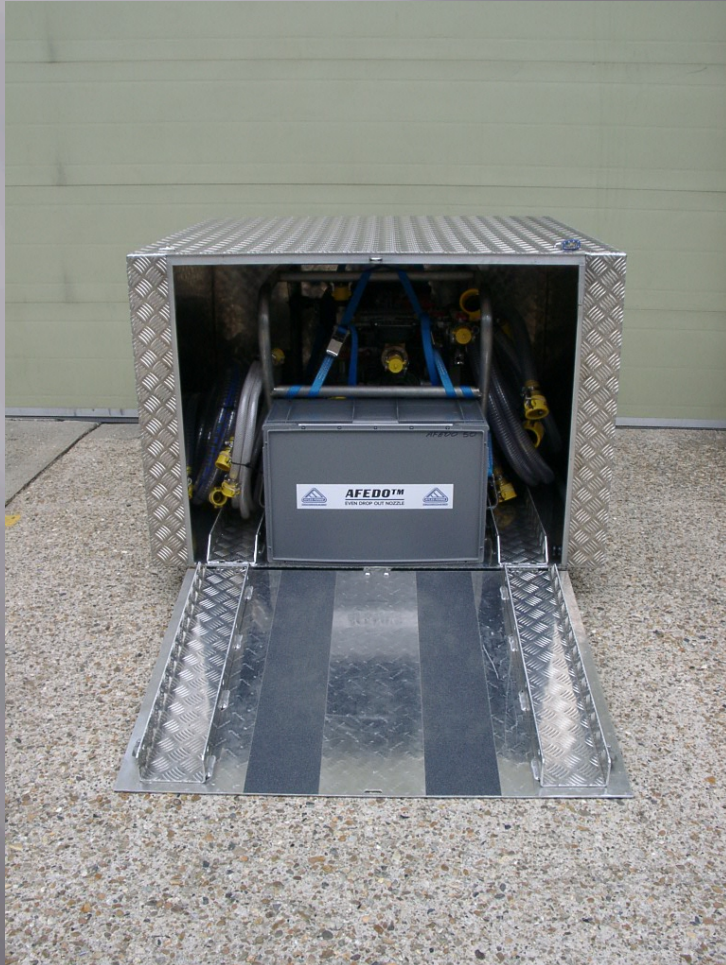
SMALL BOAT INSTALLATION



BOATSPRAY 100-TS



BOATSPRAY 100-TS MINI-CONTAINER



CLEARSPRAY 50-TS



CS50DF-TS VT Halmatic Pilot Boat for ABP Hull

AFEDO™ NOZZLE

SUMMARY OF BENEFITS

- **Compact and Portable**
- **Lower System Cost**
- **Lower Storage and Freight Costs**
- **Vessel of Opportunity Capable (BOATSPRAY Systems)**
- **Better Swath Width (11m – 16m) and Area Treatment Rate**
- **Full Instrumentation for Precise Control**

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CLEARSPRAY

**ABS DESIGN APPROVAL
&
FULL BRIDGE CONTROL OPTION**

CLEARSPRAY 100

ABS DESIGN APPROVAL



CERTIFICATE NUMBER
11LD811447-PDA

DATE
22 November 2011

ABS TECHNICAL OFFICE
London Engineering Department

CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of
AYLES FERNIE INTERNATIONAL LTD. - SEVENOAKS

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

PRODUCT: Oil Dispersant Spray System

MODEL: CLEARSPRAY 100D2F

This Product Design Assessment (PDA) Certificate 11LD811447-PDA, dated 22/Nov/2011 remains valid until 21/Nov/2016 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING


Mohammed K.M. Abbas
Engineer

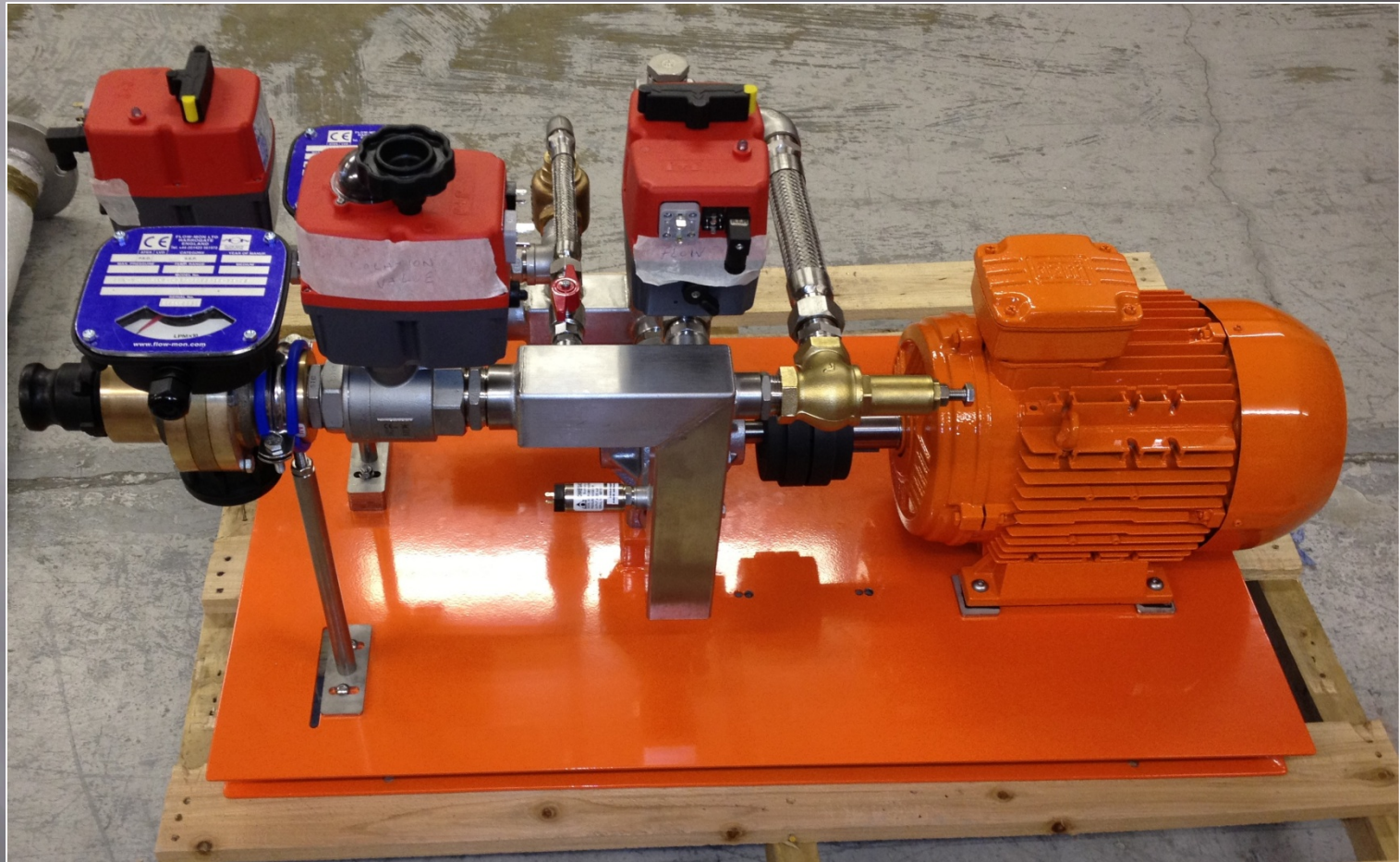
NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A35-9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

ABS000118



CLEARSPRAY 150

FULL BRIDGE CONTROL
PUMP UNIT



CLEARSPRAY 150

FULL BRIDGE CONTROL SET-UP SCREEN



CLEARSPRAY 150

FULL BRIDGE CONTROL OPTION
(BRIDGE HMI CONTROL SCREEN)



NEW DEVELOPMENTS IN MARINE & AERIAL DISPERSANT SPRAY SYSTEMS

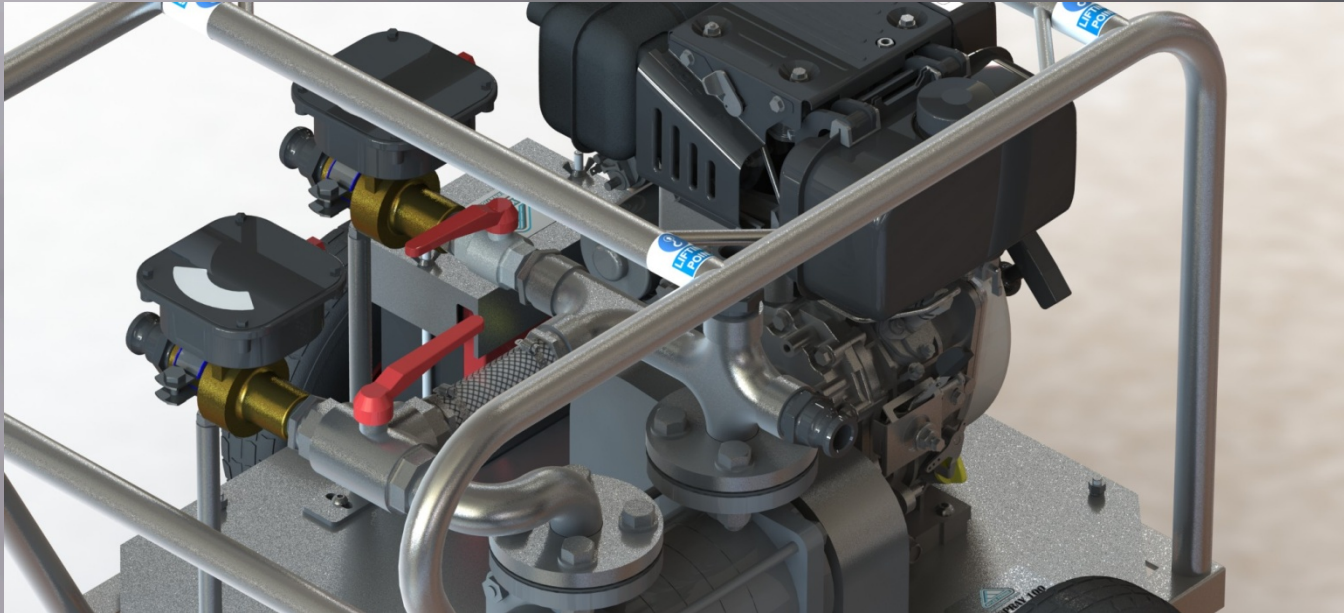
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SEASPRAY 100



OLD NAME – NEW CAPABILITIES

SEASPRAY 100



- High Spec. System with Flow Meters
- Wide Range Options
- Self Prime from up to 4m
- Supply all types of Application Devices

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BOOMIVANE SPRAY SYSTEMS

A NEW APPROACH TO DISPERSANT APPLICATION

A Project Sponsored
by the
NOFO Technology Development Programme
on Oil Spill Response

Magnus Claeson
ORC
16.30 Today
Don't Miss It!

BOOM VANE TECHNOLOGY



Photo courtesy of the Swedish Coastguard

COASTAL BOOMVANE SPRAY SYSTEM



- Portable Diesel Pump Unit – SEASPRAY 100
- 25 m Nozzle Hose Line (NHL)
- NHL Stowed on Reel
- AFI Supplies: Pump Unit, NHL and Reel
- Boom Vane system – talk to Magnus

Operating Speed: 4 – 5 kts
Swath Width: 20m
Application Rate: 50 – 200 Lt/hectare
Area Treatment Rate: 0.15 km²/hr @ 4 kts

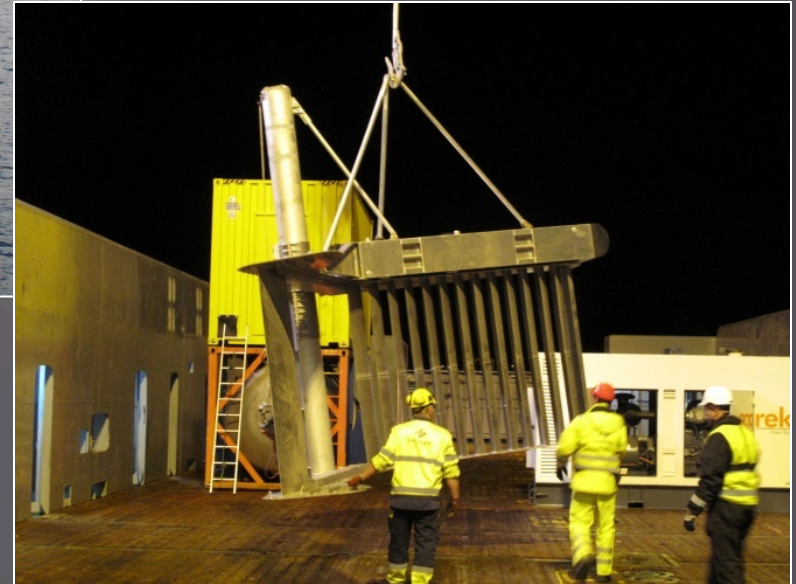


OFFSHORE BOOMVANE SPRAY SYSTEM



- Containerised System
- Electric Pump Unit – CLEARSPRAY 200
- 85 m Nozzle Hose Line (NHL)
- NHL Stowed in Container
- AFI Supplies: Pump Unit and NHL
- Boom Vane system – talk to Magnus

- Operating Speed: 4 - 5kts
- Swath Width: 50m
- Application Rate: 50 – 150 Lt/hectare
- Area Treatment Rate: 0.42 km²/hr @ 4.5 kts



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NEXT GENERATION OF AERIAL DISPERSANT SPRAY SYSTEMS

- Current aircraft are getting expensive to operate and maintain
- Rear cargo door aircraft are attractive as no aircraft mods are required
- But few rear cargo door aircraft on the civil register
- Increasing number of enquiries for aerial dispersant spray systems
- Conventional aircraft are becoming attractive
- Conventional aircraft require some modification for DSS
- Modern airworthiness requirements are more demanding

NEXT GENERATION OF AERIAL DISPERSANT SPRAY SYSTEMS (Rear Cargo Door Aircraft)



LOCKHEED C-130H

NEXT GENERATION OF AERIAL DISPERSANT SPRAY SYSTEMS (Rear Cargo Door Aircraft)



AIRBUS MILITARY C-295

NEXT GENERATION OF AERIAL DISPERSANT SPRAY SYSTEMS (Rear Cargo Door Aircraft)



ALENIA C-27J



NEXT GENERATION OF AERIAL DISPERSANT SPRAY SYSTEMS (Conventional Aircraft)



BOEING B 737-400



BOMBARDIER Q 400



ANY QUESTIONS

NIMBUS L-382G FLIGHT TESTING

2002 / 7 / 9 3:38pm