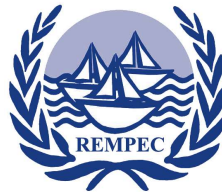


Spraying Equipment



**Mediterranean
Action Plan**
Barcelona
Convention



REMPEC Regional Webinar
November, 17th 2025
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SPRAYING EQUIPMENT



REGIONAL WEBINAR

STUDY ON THE READINESS OF THE MEDITERRANEAN REGION TO RESPOND TO MARINE POLLUTION INCIDENTS INVOLVING LOW-SULPHUR FUELS AND ALTERNATIVE FUELS AND
REVISED GUIDELINES FOR THE USE OF DISPERSANTS FOR COMBATING OIL POLLUTION AT SEA IN THE MEDITERRANEAN REGION

FANNY AZZID JOUANNIN (CEDRE)

© Cedre

Spraying equipment

Generality

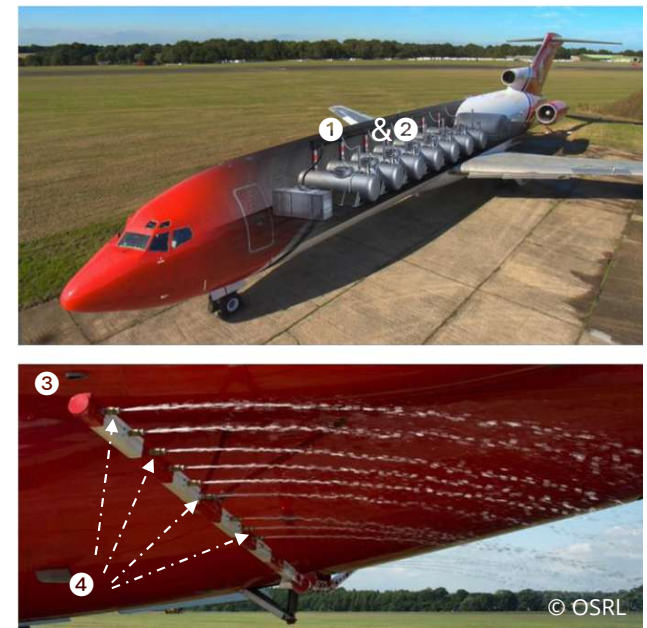
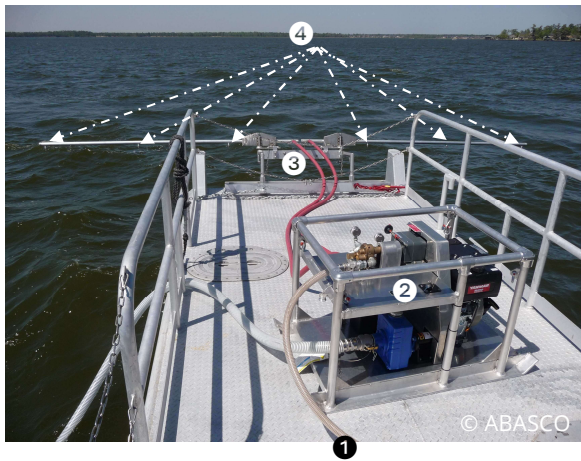
- Spraying equipment must be designed to:
 - **Manage the application rate of dispersants** (volume of dispersant spread per treated area, generally in liters per hectare (L/ha)) ;
 - **Form dispersant droplets** measuring between 300 and 700 μm , or even 1,000 μm ;
 - **Apply a uniform amount** with a deposition with a minimum delivery variance.



Spraying equipment

Generality

- Spraying equipment are generally composed of :
 - One or more **dispersant tanks** (❶) ;
 - A feed **pump** (❷) with pipes and filter to remove solid impurities that could clog the system.
 - One or more **supports** for the nozzle(s) (❸) .
 - One or more **calibrated nozzle(s)** (❹).



Spraying equipment: Equipment evaluation

Goals

- Characterize the variability of droplet size in the spray plume (study of dispersant droplet size distribution)
Droplet size between 300 μm and 500 to 800 μm depending on the device.
- Characterize the amount of product applied to the ground (Deposition study)
Homogeneity of volumes applied



Exercise © Cedre



Deepwater Horizon Accident © US Coast Guard photo

Spraying equipment: Equipment evaluation

Measurement protocol



➤ **Equipment tested :**

- 4 single-nozzle devices
- 3 spray arms

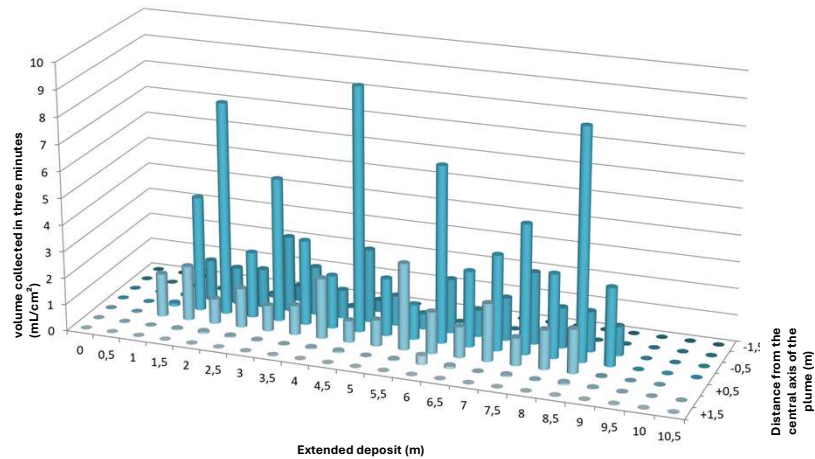
➤ **Sprayed products :**

- *Dispersant Finasol OSR52*
69,7 cSt at 20°C
- *Water*
1 cSt at 20°C
- *Diluted dispersant*

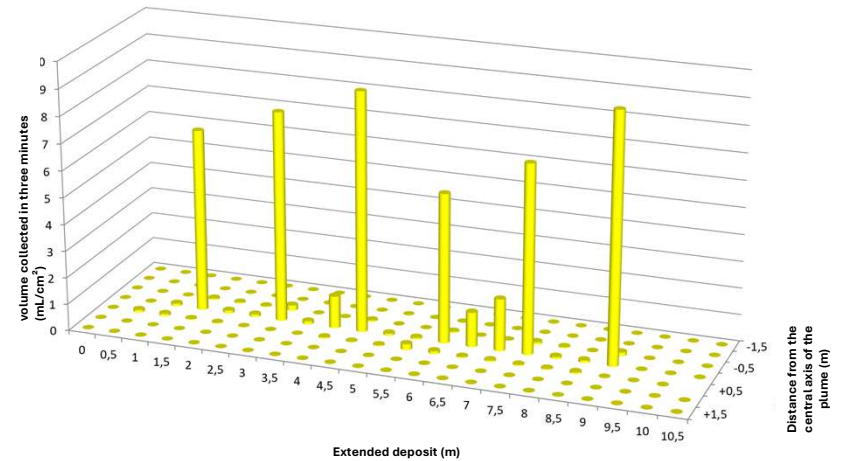
Spraying equipment: Equipment evaluation

Exemple of spray arms results (Deposition) :

Water



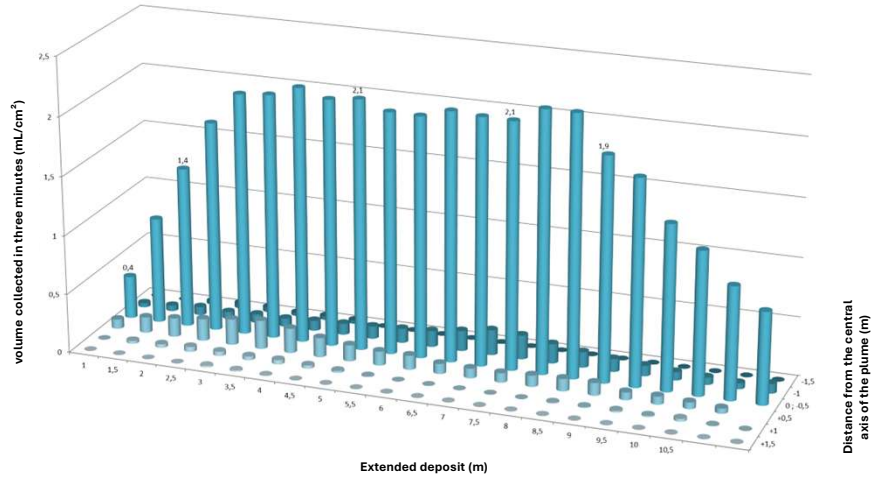
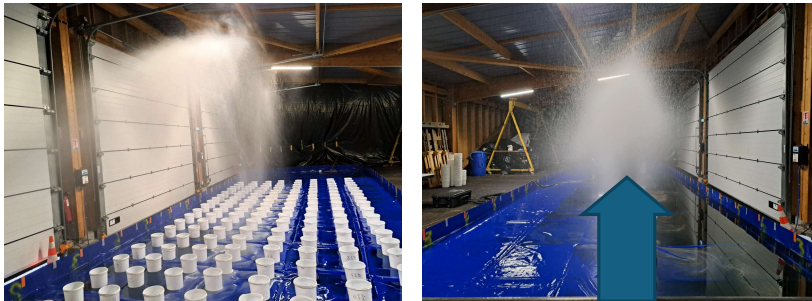
Dispersant



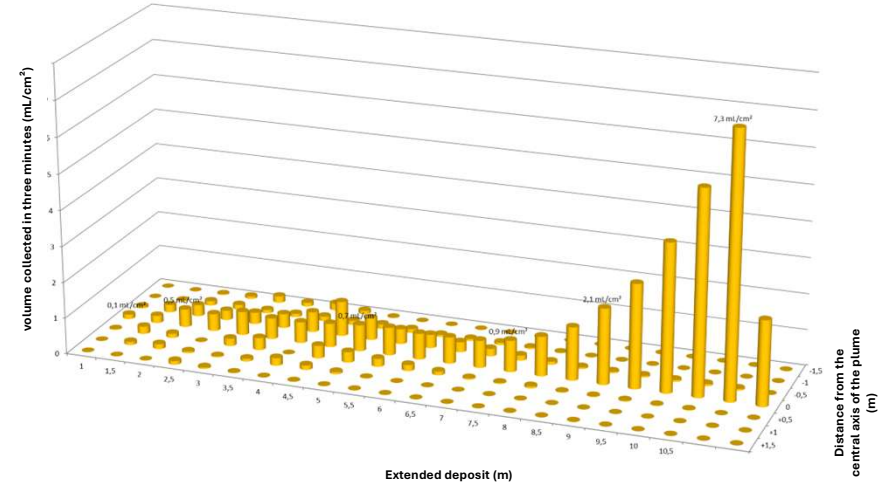
Spraying equipment: Equipment evaluation

Exemple of sigle spray nozzle results (Deposition) :

Water



Dispersant



Conclusion



Our tests aimed to characterise the variability in the size of droplets in the spray plume (droplet size study), as well as the quantities of product deposited at ground level (deposition study).

TotalEnergies' Finasol OSR52 dispersant is one of the most viscous dispersants available on the market.

Tests showed disparities in dispersant plumes depending on the products sprayed.

It may be advisable to check the adequacy of equipment/dispersants before adding them to stocks.

Q/R

Thank You



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