

**HIGH PRESSURE WASHING USING HOT WATER (with or without products added)**

N 19

**SCOPE**

Substrate: stones, boulders, rocks, infrastructures  
Pollution: slight to very heavy  
Pollutant: all types  
Sea: tidal or non-tidal

**EQUIPMENT NEEDED**Basic equipment:

- Thermal pressure washer

Extra equipment:

- Direct water supply at sea; seawater storage
- Recovery: small worksite booms, stranding boom, planks, sorbent, skimmer, pump
- Washing agents (possibly)

**DESCRIPTION/PRINCIPLE**

This technique should only be carried out once the initial clean-up phase has been completed and the sides have been scraped. It involves washing oiled hard surfaces with hot water at high pressure. Washing implies the recovery of effluents; this means a specially designed system must be set up before the washing operations can begin. Heat and high pressure can be detrimental to certain environments. The temperature and pressure should therefore be adjusted depending on the nature and fragility of the substrate, and also to obey the specific restrictions and recommendations which may exist for certain ecologically sensitive sites.

**CONDITIONS OF USE**

Pollution: thin layer; moderately to highly weathered oil.  
Substrate: mechanically resistant surfaces (stones, rocks, quays).  
Site: access possible for washing equipment.

**IMPACT ON THE ENVIRONMENT**

Physical: possibility of impact on very crumbly rock; risk of landslide on fragile ground/cliffs (not to be carried out on crumbly cliffs).  
Biological: risk of sterilisation of surfaces and possibility of impact on surrounding sedimentary fauna.

**PERFORMANCE**

Yield: varies depending on the site (a few m<sup>2</sup>/h per machine).  
Minimum workforce required: 10 people for 3 to 4 machines (not including recovery of effluents).  
Waste: liquid effluents; oil emulsified to varying extent.

**OBSERVATIONS**

- Provide the necessary protective equipment: overalls, oilskins, boots, gloves, head gear, glasses, masks. Users are exposed to a lot of dirt, containing potentially toxic particles (aerosols).
- Assess the need to wash, taking into account the degree of pollution and the ecological sensitivity of the site, e.g. presence of lichen and vegetation growing in cracks.
- Do not uproot vegetation or scrape the soil (lithosol in cracks).
- Recover loosened oil; protect the surrounding area (using geotextiles).
- Use thermal washers which are suitable for seawater and can be easily transported.
- Rotate users (on the following basis: 1 spraying, 1 monitoring machine and water supply, 1 recovering effluents).
- Plan for maintenance/repairs on site (1 mechanic for 10 machines).
- Using hot water without high pressure can be a good solution.
- Using a washing agent is not always necessary. Tests can however be carried out to assess the potential gain. The decision to use a washing agent requires approval: only use a product that has been tested by a recognised organisation (for efficiency, toxicity, biodegradability).