

ABSTRACTAPPARATUS AND METHOD FOR PERFORMING
EXTERNAL SURFACE WORK

For cleaning and/or painting the exterior 18 of a ship hull while the ship 10 is in dry dock 14, one or more staging devices 32 are provided. Each includes a metal framework tower 34 supporting a vertically movable elevator assembly that comprises a trolley 36, from which a variably laterally projecting platform 40 is supported on articulated, cantilevered arms 38. Adjustable, non-porous shrouds 94, 102, 110, 122 enclose a volume of space 44 between the outside of the tower 34 and an increment 88 of one side of the exterior of the ship hull, from above, fore, aft and outside. Cleaning and painting operations are conducted from the platform 40 on the hull increment 88, and debris is removed from the dry-dock deck 12 area enclosed by the shroud, after which the device is moved by crane 20, typically twenty feet (6.1 m), towards the ship's bow 24 or stern 26. The shrouds 94, 102, 110, 122 are then adjusted so that a further hull increment 88 can be worked on. The trolley 36 and extension-retraction of the platform support arms are operated by electrohydraulic winch 60 and hydraulic cylinders 80, 84, respectively. The margins 112 of the shroud 94 may be fastened by magnets 114 to the hull 18. Air drawn through the enclosed volume from above at 120, is drawn out near the dry-dock deck 12 at 46 for processing to remove dust and appropriately treat VOCs, if present.

FIGURE 1 & 2.

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