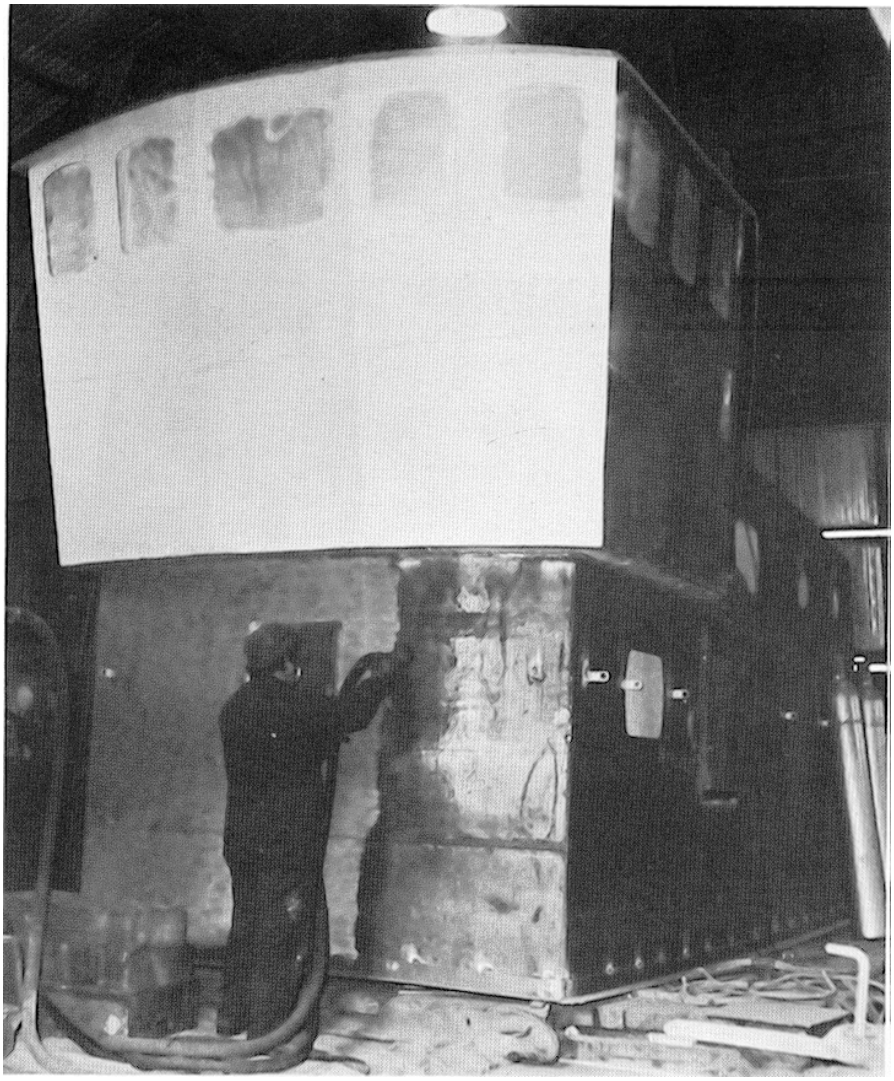
AC15
Anti-Corrosive

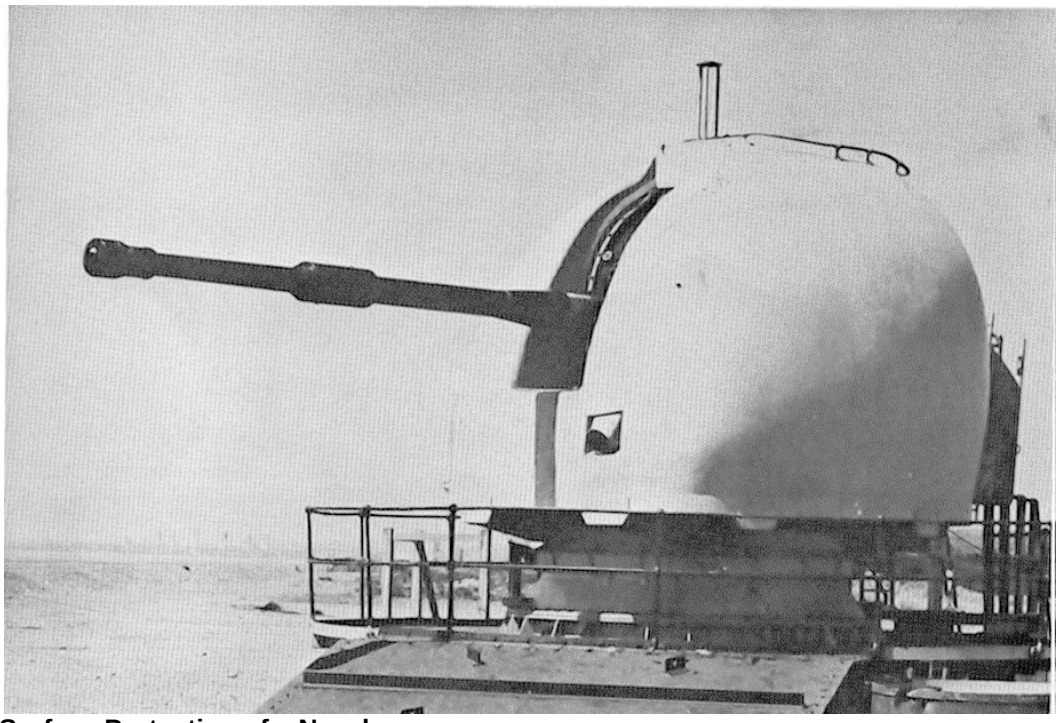


Anti-corrosion Protection at Sea

The anti-corrosive properties of the metal spraying process are widely recognized in the trawler industry where steel super structures are subjected to very damaging corrosive attach from the sea and salt laden air of the world's fishing grounds.

The photograph shows the base of a trawler deckhouse being gritblasted prior to metal spraying. The upper section has already been sprayed with 150μm (0.006") of zinc, and the base will be similarly treated.
The economics of using this most efficient method of anti-corrosive protection are being recognized more and more in industries where corrosion presents a serious day-to-day problem.

AC7
Anti-Corrosive



Surface Protection of a Naval weapon

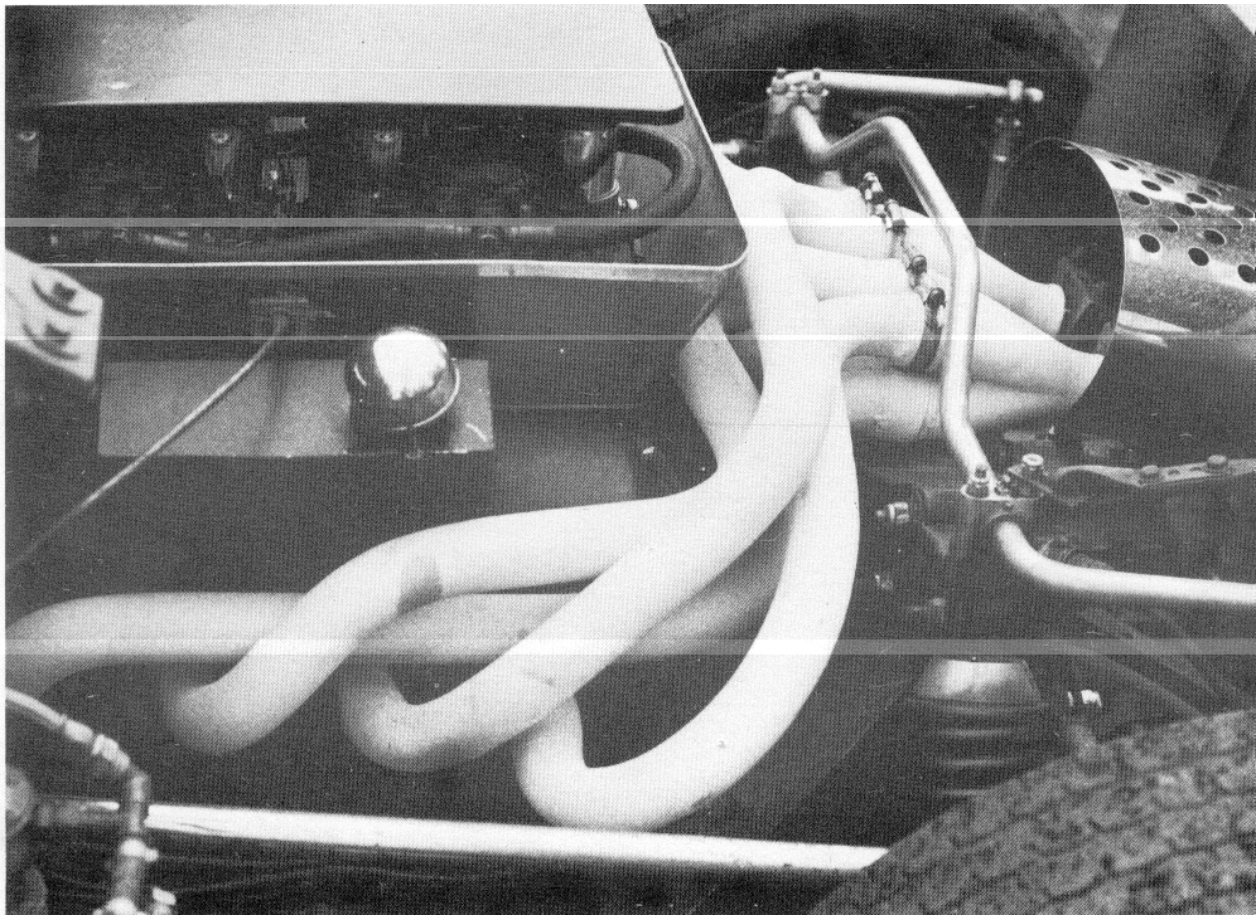
The high rate of fire of the 4.5" (115mm) Naval Gun developed by R.A.R.D.E. combines with the marine atmosphere of the weapon's location to create a formidable anti-corrosive problem. There is a build up of an ammoniacal copper residue from the shell driving bands and the breakdown products of combustion from the propellant, plus a massive volume of flame impingement on the inside of the fume extracting device mounted along the barrel. The heat generated during firing also contributes to the corrosive problem as the temperature approaches 250^{o}C.

Traditional methods of protecting the metal surfaces would be totally inadequate, and working in conjunction with Metallisation Ltd., R.A.R.D.E. has produced an anti-corrosive treatment to match the advanced nature of the gun itself.

The treatment is two-fold; the internal surfaces of the fume extractor are gritblasted and arcsprayed with aluminium to a thickness of between 200μm (0.008") and 250μm (0.010"). The surface is then burnished to remove irregularities, which could provide areas in which corrosive deposits could build up. Externally, the surface is gritblasted followed by a deposit of aluminium to a depth of 375μm (0.015"). A paint finish is then applied consisting of an etch primer, a chrome rich epoxy under-coating and a topcoat of two-part polyurethane paint.

This is a very sophisticated treatment, and although specialized in this particular context does have civil and industrial applications where equipment is operating under equally arduous conditions.

AC 16
Anti-Corrosive



Heat resistant surfaces produced by the metal spraying process have many applications; the photograph shows a rather unusual variation of this theme.
Two independent exhaust systems, fabricated from steel tube in the Ford GT.40 sports car, have been metal sprayed with 175 microns (0.007”) of aluminium using the latest Metallisation Fine spray electric arc techniques.
The treatment has been found to be fully effective in overcoming the extremes of heat oxidation and thermal shock from the output of this high performance engine.