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Valid From: 6 July 1987

Last Reviewed: August 2020

SPECIFICATION FOR THE PREPARATION OF COMPONENT PARTS IN SHOP WITH DRY GRIT BLASTING TO ISO STANDARD 8501-1 Sa3, EQUIVALENT TO SSPC SP5.

### DECONTAMINATION

Components to be grit blasted should be examined for contaminants such as oil, grease or service duty related product etc. Where the nature of contaminants is not known, care should be exercised to avoid bodily contact, or the spread of contaminant from the component. Minor contamination may be treated by wiping using a suitable solvent or water wash, but where major contamination is evident components should be treated by steam cleaning combined with an emulsifying degreaser.

### PRELIMINARY WORK

Examine items to ascertain areas in need of special attention. Particular care should be taken when determining treatment in such areas as drain plugs, bleed ports, take-off nozzles, bearing surfaces, flanges and shaft bores.

Grit blast cleaning should be carried out twice in the case of components which have seen service for more than twelve months, otherwise a single blasting operation may be acceptable.

The items to be blasted should be carefully masked using a suitable masking tape to prevent damage to areas not being coated. Where necessary, the surfaces to be masked should have an extra application of adhesive or tape primer to prevent the tape being blown off the surface during the blasting operation.

Exposed stud holes, dowel holes, oilways etc., should also be cleaned free from grease or oil using solvent, then masked or plugged to prevent ingress of blasting abrasive.

### EQUIPMENT

Compressed air should be free of water and oil and suitably cooled. Adequate separators and trap should be used and these, along with receivers and after coolers, should be purged on a regular basis.

Air pressure at the blasting nozzle should be 7kg/cm<sup>2</sup> (100 psi) minimum. Blast nozzles should be maintained in good condition and discarded when the diameter is increased by more than 1mm over the original size. A suitable deadman or on/off control operated by the blaster must be fitted. Blasting operatives should have suitable protective clothing and wear helmets fed with cleaned air and giving good clear vision. The work area should be kept clean and well ventilated.

### ABRASIVE

Clean, dry blasting abrasive shall be used. The abrasive should be of a particle size should give a profile between 2-4 mils (50-100 microns) peak to trough with a maximum of 6mils (150 microns) for rogue peaks, except where different profiles are specified on the product data sheet. Other abrasive types should only be used after consulting with Corrocoat USA, bear in mind that legislation governs the type of abrasive which can be used in certain countries.

Where recyclable iron or steel grit is used this shall be cleaned and graded before reuse, to remove contaminants.

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### PRE BLAST

Examine the area to be blasted in order to determine a logical sequence of progress, then blast all areas to be coated or painted to the surface cleanliness standard ISO Standard 8501-1 Sa2½ or SSPC SP6. Remove blast residues by blowing off with compressed air or vacuum cleaning.

### METALLIC SALT REMOVAL

Components that have seen service in an environment likely to produce ferrous or metallic salts by the corrosion process may require treatment for salt decontamination. This should be carried out by washing the freshly blasted surface with copious amounts of clean water. The wetted surfaces should then be mopped dry and the component allowed to stand for a minimum period of four hours before re-washing with further copious amounts of fresh water and mopping dry.

Corroglass/Polyglass products are tolerant of high levels of metallic salts, but surface salt levels are critical with some other coating systems. Where levels need verifying this should be carried out in accordance with the procedures stated in Corrocoat user data sheet 7/30..

### ENGINEERING WORK

After pre blast and salt washing, where required, engineering work should be carried out. Flange rebates should be machined, welding carried out, drain plugs bushed, bearing bushes removed etc. All sharp edges and corners should be radiused to approximately 2mm, weld protrusions etc ground smooth or flush with surface. Where necessary, pump impellers or other rotating equipment should be statically balanced.

The masking and plugging for protection against damage and ingress should be checked and upgraded where necessary.

### BLASTING

Dry blasting should only be carried out where the relative humidity is less than 90% and when the surface of the metal is at a temperature of 86°F (30°C) or more above dew point. Blasting should be carried out in accordance with ISO Standard 58501-10 Sa3 orequivalent to a profile of approximately 3 mils (75 microns). The largest practical blast nozzle for the size and type of work piece should be utilised. It should be borne in mind that because of the nature of some components direct blasting may not be achievable in some areas, but cleaning to a good standard may be possible by ricochet. Where this occurs the blast profile criteria may not be met, however, provided a good standard of cleanliness is achieved, low profile in inaccessible areas shall not be cause for rejection provided the full standard is achieved elsewhere.

A mirror should be used to check inaccessible areas such as reverse angles etc and a 45 degree blast nozzle used to improve access on some items.

### CLEANING

All surfaces shall be cleaned of grit blasting residues by blowing with dry oil free compressed air or, wherever possible, vacuum cleaning. After blasting, care should be taken not to touch white metal surfaces with bare hands. Where it is necessary to touch blasted surfaces, clean gloves should be worn. Lifting slings and strops should be sheathed to avoid surface contamination. After completion of cleaning, no grit or dust shall remain left or embedded on the surface and there shall be no contamination from hose scuffs, strops etc.

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## INSPECTION

Inspection shall be carried out immediately on completion by a Corrocoat supervisor and coating only commenced after the work sheet has been initialed. Where customer inspection is called for this shall be carried out in the presence of a Corrocoat supervisor. All inspectors are to be reminded that touching the white metal surface with ungloved hands will necessitate reblasting.

## COATING

Following cleaning operations, all surfaces requiring coating shall be given a first application. This application should take place immediately after the blasting/cleaning operation, but where for practical reasons this is not possible, application shall take place within a maximum of 4 hours or before if there is any visible sign of blast condition change, whichever is the sooner. Where a condition change is apparent or where a period greater than four hours elapses, the surfaces to be coated shall be re-blasted. Refer to Corrocoat Technical Services for more details.

Before application of the first coat, masking tape adjacent to the coating area should be peeled back to avoid overlap and subsequent edge contamination.

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