

Application Guide Steelmaster 1200WF Intumescent Coating

Document identification:	TSS/ SM-AG 02	Prepared by	N. Shrikumar	1111
Date:	02.06.2014	Approved by		1
Version:	1	Number of pages	13	

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1.0 Introduction

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1.1 The Product

Steelmaster 1200WF is a single pack waterborne acrylic thin film intumescent coating. It is independently tested and approved for fire protection of structural steel exposed to cellulosic fire. This manual gives a detailed guidance on application and use of the products, together with a primer and topcoat.

This document shall be used as a reference guide. It is not a method statement and should be read in conjunction with the product technical data and safety data sheets

Product References for this document:

1. Steelmaster 1200WF waterborne acrylic intumescent coating.

2. Primer: This refers to all approved Jotun primers. For primers not on the approved list a compatibility letter must be obtained from Jotun's Technical Department.

3. Topcoat: This refers to the topcoat wherever it is applicable and approved by Jotun.

Where competitor's topcoats are considered for use the topcoat manufacturer is responsible for issuing a compatibility/suitability statement.

1.2 The use of intumescent coatings

Intumescent coatings are used as a method of protecting steelwork in the event of a fire. On exposure to heat they expand to many times their original thickness forming a "char" which insulates the underlying steelwork, thus extending the time to structural collapse. Allowing personnel within the vicinity have time to vacate the building and the fire service will have a greater time period in which to bring the fire under control.

1.3 Coating system

It must be noted that Steelmaster 1200WF is used as part of a coating system, inclusive of a suitable Jotun anti-corrosive primer or other approved primers. In addition a topcoat may be required; either for aesthetic reasons or to further enhance the durability of the system.

Steelmaster 1200WF can be applied in internal environments as defined in ISO 12944 from C1 to C3 corrosive categories. For C3 internal exposure conditions a suitable approved topcoat must be applied when the specified intumescent dry film thickness is achieved, fully dry and approved. This product is not suitable for external environment.

Steelmaster 1200WF can be used for both onsite and offsite application.

A typical system would be as follows:

Surface Preparation: Blast clean to Sa $2\frac{1}{2}$ (ISO 8501-1) to provide optimum adhesion for the approved primer to the substrate and for the developing char when exposed to a fire.

Priming: To provide corrosion protection using an approved primer

Steelmaster 1200WF: The specified dry film thickness (DFT) will depend on the individual size of the steel sections and the fire rating required

Topcoat: Protects the Steelmaster 1200WF from moisture, other contaminants, gives a cosmetic finish and enhances the durability of the coating system

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Steelmaster 1200WF is approved to a range of global and country specific standards, including but not limited to BS 476 Part 20/21. For the latest information relating to fire testing and approvals please contact your local Jotun protective coatings/technical department.

1.5 Applicators

For optimum results the Steelmaster 1200WF system must only be applied by skilled, experienced applicators. In the case of offsite application processes only specialist companies are recommended. It is the applicators responsibility to ensure that application is carried out as per working procedures and the specified film thickness is achieved.

Jotun's technical service is available to assist the applicator subject to Jotun standard conditions of sale

2. Storage

Steelmaster 1200WF must be stored between the storage temperature of 5°C and 35°C, and in accordance with national regulations. Storage conditions are to keep the containers in a dry, cool, well ventilated space, and away from direct sunlight, source of heat and ignition. Containers must be kept tightly closed.

Must be protected from freezing at all times during storage and transport

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Shelf life at 23°C is 6 months from date of manufacture subject to re-inspection thereafter.

3. Environmental Conditions

3.1 Application precautions

Intumescent coatings require a greater degree of environmental monitoring than conventional coatings. Intumescent coatings are moisture sensitive and must be protected against high humidity, rain and consequent water ponding particularly during onsite application, otherwise blistering and/or delamination will occur. During construction phase care must be taken to ensure coated steelwork is protected from high humidity, rain and ponding water. It is advisable to apply Steelmaster 1200WF to the steelwork when the building has been made water tight and dry.

3.2 Moisture resistance

During the initial drying period the treated steelwork must be protected. All waterborne products will react to high humidity, moisture condensation, rain and/or any water ponding when exposed. This will cause blistering and delamination of the Steelmaster 1200WF. Where a topcoat is specified, application must occur as soon as the final coat of Steelmaster 1200WF is fully through dry.

3.3 Ambient conditions

During application the following parameters must be monitored and well documented. Relative humidity should not exceed 80%. The pre-primed substrate must be moisture free. The steel temperature must be between 5°C and 60°C and at least 3°C above the prevailing dew point temperature. Where the substrate temperature during application is likely to exceed 50°C, it is recommended to apply a thin coat of Steelmaster 1200WF at a DFT of 400-500 microns. Allow to dry as per recommended minimum drying time between coats mentioned in the product technical data sheet. Apply further coats to build up the DFT to the specified thickness as per loading table/project specification.

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If conditions are deteriorating or likely to do so then application must be stopped when the steel temperature falls 3°C below the dew point and/or RH >80%. In stable conditions it is recommended that the ambient conditions are monitored every 4 hours. Where conditions vary it will be necessary to monitor at least every one or two hours.

4.0 Surface Preparation

4.1 Cleaning

All steel must be physically clean, dry and free from mud, concrete slurry, grease, zinc salts and other forms of contamination. Complete washing down of steelwork may be necessary. Oil and grease must be removed in accordance with SSPC SP1 solvent cleaning.

4.2 Pre Blast steel preparation

Surface laminations and sharp edges must be removed, sharp edges must be rounded off smooth prior to priming. Weld spatter or flux, dust, spent abrasive and all contamination must also be removed before primer application. Ensure substrate is clean and dry before painting.

4.3 Blast Cleaning

Steelwork must be blast cleaned to Sa 2½. in accordance with ISO 8501-1:1998 cleanliness. The blast profile must be as per the requirement of the primer used. Priming must be carried out before oxidation of the steel has occurred (normally within four hours). Should oxidation occur then steel must be re-blasted.

5.0 Primer

Steelmaster 1200WF must always be applied over a primer approved by Jotun and must be applied within the recoating interval of the primer as specified. Areas with breakdown, damage, etc. must be prepared to the specified standard of blast cleaning (Sa 2½. in accordance with ISO 8501-1:1998) or power tool cleaning to minimum St 3 (for small areas) and a coat of primer touched up before Steelmaster 1200WF is applied.

Steelmaster 1200WF has been fire tested as a system. For the complete list of approved Jotun primers and other approved primers please contact Jotun's technical department.

The typical primer thickness is 75 microns. The maximum DFT of the primer system should not exceed 200 microns depending on the type of product used. If the primer system exceeds the maximum recommended DFT of 200 microns sanding or sweep blasting maybe required to bring down the total DFT of the primer system to below the specified limit of 200 microns.

If in doubt contact Jotun's technical department.

Compatibility of Intumescent coatings with zinc rich primers

Zinc rich primers, usually based on epoxy resin or silicate binders, are often used as corrosion protection coatings on structural steelwork. Weathering or prolonged exposure of the zinc primer will lead to the formation of zinc salts on the surface of the coating. If subsequent coatings, including intumescent coatings are applied over this layer of zinc salt, problems will be experienced with inter-coat adhesion. In such situations therefore, it is essential that the zinc salts are completely removed by washing down with fresh clean water. Hard bristle brushes maybe used to remove stubborn zinc salts. Where full removal of zinc salts cannot be guaranteed, the only safe option is to remove the zinc coating and re-prime the steelwork.

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Steelmaster 1200WF must not be applied directly over zinc primers. An epoxy tie coat must be applied prior to the application of the Steelmaster 1200WF system. The recommended Jotun approved tie coat is Penguard Tiecoat 100 applied at a DFT of 35 microns.

In all cases, the intumescent coating manufacturer must be consulted to confirm the compatibility of the priming system with the intumescent system and, where applicable, the tie coat.

6.0 Application

6.1 Product Mixing

Steelmaster 1200WF must be mixed with an air powered mechanical paint mixing tool that is clean and fit for purpose. Mechanically mix for about 1-2 minutes to ensure that the product is mixed to a uniform consistency into a homogenous mixture. Slow speed mechanical mixers are recommended to ensure no aeration is caused and no air bubbles are formed during the mixing process.

Manual mixing is not recommended.

6.2 Airless Spray Equipment

6.2.1 Airless spray pump

A minimum pump ratio of 56:1, although 60:1 or 75:1 ratios maybe used for large projects and onsite work. Use a 30 mesh internal filter or alternately remove all filters from lines and guns to maintain pressure but use 30 mesh filter at pump inlet. Removal of filters means that good housekeeping will be required to avoid contaminants getting into the material. The airless spray equipment including airless gun, fluid lines, spray tip and other associated components must be pressure rated to 5000 psi (350 kg/cm2), 35.0 MPa.

6.2.2 Spray pressure

A coarse mesh may be fitted over the wet end to prevent ingress of alien particles. The foot of the wet end must be placed into the material (any extension must be removed). Minimum spray pressure is 20 MPa (200 kp/cm², 2900 psi). Please refer to the product technical data sheets.

6.2.3 High pressure fluid lines

These should preferably be new and or dedicated to the use of Steelmaster 1200WF. Lines must be 10mm (3/8 inch) diameter with a 6.5mm (¼ inch) diameter whip end. The length of the fluid line is to be kept to a practical minimum with recommended maximum length of 60 meters. This will minimize pressure drop and maintain optimum atomization.

6.2.4 Spray tips and fan angles

The use of reversible tip assemblies is recommended, not static or variable, to allow easy clearance of any blockages. Tip sizes 0.017" to 0.021" thou (0.43 to 0.53 mm) depending on project. Angles must be selected taking into account the configuration of the section to be coated. The recommended fan angles vary from 20-40°. Selection of the most suitable tip and fan angle is of vital importance as this contributes to savings from excessive wastages.

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Sufficient spares and tools must be present on the site to permit continuity of work in the event of equipment failure or malfunction. A supply of clean, absorbent, industrial cleaning rags will be required to assist in cleaning down operations and good housekeeping. Dispose with extreme care as solvent soaked rags could present a potential fire hazard.

6.2.6 Equipment cleaning

Steelmaster

It is recommended as best practice to use airless spray equipment suited exclusively for spraying waterborne coatings. Although this is not mandatory, well maintained airless spray equipment will perform well. Alternating use of solvent & water borne coatings need conditioning of the spray equipment to avoid solvent contamination of the water borne paint. All equipment containing solvent in the pump, hoses and gun must be thoroughly cleaned. Before spraying, circulate a suitable thinner such as Thinner No 17 through the equipment, hoses & gun until such time clean solvent flows through them. This should be followed by flushing with clean fresh water through the pump, hoses & gun until clean you see a clean water flow. Care should be taken to ensure no water is mixed with Steelmaster 1200WF when the paint is circulated through the pump,hose and gun. Allow some of the Steelmaster 1200WF to flow out into the waste container to ensure that any Steelmaster 1200WF mixed with water is not used for spraying. Mixing of even small quantity of water with Steelmaster 1200WF can affect the spray properties of the product.

6.3. Airless spray Application

Steelmaster 1200WF is supplied ready for use and must not be thinned.

Single coat application

The recommended method of application is by heavy-duty airless spray machines. A typical wet film thickness (wft) of not more than 1000 microns per coat is highly recommended. If thicker coats are applied sagging may occur and will also affect the drying and handling time. The minimum and maximum over coating times are given in the technical data sheet of the product. The most suitable method and technique will depend on a number of factors such as coating thickness required, configuration of the steelwork, access to the steelwork, programming of the project, presence of other trade activity on site, etc.

Multi-coat application method

Where the specified DFT is greater than 700 microns, apply two or more coats to build up the total specified DFT. Keep the wft to a maximum of 1000 microns per coat. Follow the recommended over coating intervals between coats as given in the product technical data sheet. Drying time and over coating intervals will depend on local environmental conditions.

Note : The over coating time between each coat depends on the total DFT required to be built up as a system. The actual drying time can vary depending on environmental conditions such as air temperature, relative humidity, weather conditions, ventilation and also the number of coats, total dry film thickness applied, etc.

Water ponding must be avoided. Exposure of Steelmaster 1200WF to moisture, rainwater, high humidity or condensation will cause defects such as blistering and/or delamination.

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7. Brush Application

Steelmaster 1200WF is suited for brush application only on small areas. Application rates will always be slow when compared to airless spray. Multi-coat application by brush to achieve high DFT is neither practical nor economical. Care should be taken to achieve a uniform DFT.

8.0 Topcoat Application

Only topcoats approved by Jotun can be applied over Steelmaster 1200WF. Contact Jotun's technical department for the approved topcoats

Prior to application of the topcoat ensure that the Steelmaster 1200WF has been applied to the specified DFT. The surface must be clean, dry and free of contamination before applying the topcoat.

The minimum over coating time between Steelmaster 1200WF and the top coat is 48 hours. However this can vary depending on the total applied DFT of the Steelmaster 1200WF system as thicker coatings will need a longer drying time. The actual times can vary depending on environmental conditions such as air temperature, relative humidity, weather conditions, ventilation, number of coats, total applied DFT of the system etc.

Please contact Jotun protective coatings/technical department in case of any clarification.

Following inspection of Steelmaster 1200WF intumescent coating, to ensure it is within specification requirements and free from contamination, topcoat must be applied as per the project specification. For exposure to ISO 12944 C2 environments a topcoat of minimum 50 microns DFT is recommended. For C3 conditions we recommend two coats of 50 microns DFT per coat. The total DFT of the topcoat should not in any case exceed 100 microns. Even if Steelmaster 1200WF is top coated, water ponding must be avoided

It is important that the topcoat is applied at the specified DFT. To achieve a uniform finish on an uneven surface is difficult and may require additional coats. As a guide the wft of the topcoat must be measured at regular intervals to ensure the specified DFT is obtained

9. Finish and visual appearance:

The cosmetic finish of **Steelmaster 1200WF** will depend largely on the method of application. Generally airless spray application will give a superior finish.

SCI P160 section 4.3 clause R470 outlines three standards of finish

- 1. Basic Finish : The coating system achieves the required fire and corrosion protection performance but is not required to achieve any required standard of finish
- 2. Decorative Finish: In addition to item 1, a good standard of cosmetic finish is required when viewed from a distance of 5 meters. Minor orange peel or other textures resulting from application or localized repair is acceptable.
- 3. Bespoke Finish : In addition to item 1, the finish coating is required to have a standard of evenness, smoothness and gloss agreed between specifier and contractor

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10.0 Dry film thickness measurement

10.1 Integrity of system

The effectiveness of Steelmaster 1200WF is controlled by thickness applied to give the appropriate fire rating. It is essential to ensure that the correct thickness applicable to each section size is obtained according to the issued loading table

10.2 Overall determination

The film thicknesses for Steelmaster 1200WF are included in the Jotun loading tables. These thicknesses apply only to the intumescent coating and are not inclusive of any primer coat. Allowance will have to be made for the thickness of primer coat and topcoat (deduct) when measuring the overall system.

10.3 Method

An electronic DFT gauge, capable of measuring the maximum DFT as per specification

(0 - 7mm) and capable of storing statistical data, is strongly recommended, to enable a meaningful survey to be conducted. Regular calibration of gauges on a smooth plate is essential. (Equivalent to Elcometer 456). Drying times to allow readings to be taken with a magnetic DFT probe will vary depending on thickness and ambient conditions. To prevent sinking of the probe into soft coating, plastic calibration shims shall be used to spread the pressure & weight of the probe. Remember to compensate the shim DFT in obtained reading Measurements must be taken in accordance with ASFP Technical Guidance Document :11 - 2008.

A copy of this can be obtained from the <u>www.asfp.org</u>

10.4 Measuring gauges

The method of thickness determination shall use a gauge employing the electro-magnetic induction principle. Such instruments shall have a range appropriate to the specified DFT and shall be calibrated on a smooth plate prior to use. Calibration should use shims appropriate to the specified film thickness. The instruments must be capable of storing data. Ability to print and/or download to computer would assist the contractor in presentation of data.

10.5 Thickness measurement

Primer thickness may be determined either after application in shop, or on site prior to commencement of application of the intumescent basecoat. It should be a requirement of the contract that steelwork delivered to site in primed condition should be accompanied by a documented record of primer thickness supplied by the fabricator. If this is not available, the site contractor must be required to conduct a primer thickness survey prior to commencement of intumescent application. Establishing the correct primer thickness is important.

Measurement at this stage will more easily facilitate any subsequent corrections which may prove necessary. If the total intumescent dry film coating thickness, allowing for the underlying primer, is found to be within specified tolerances, application of the next coat (usually a decorative and/or protective coat) can proceed.

If the total intumescent dry film coating thickness is found to be outside the specified tolerances, the procedure outlined in section 10.8 must be followed.

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Indentation of the coating by the measuring instrument probe indicates insufficient hardness of the coating and measurements must be deferred. However, if programming requires coating to proceed urgently, by agreement with the specifier a shim of known thickness can be used to spread the load of the probe tip on the coated surface, allowing measurement to proceed before the coating has fully hardened.

The dry film thickness of coating and shim together can then be measured and the shim value deducted to give the coating thickness.

The protective/decorative coating thickness is difficult to measure due to the variance in thickness of the underlying coats and its usual relative low thickness. However, the thickness may be important to ensure the longevity of the system. Application within the specified tolerances is best ensured by careful monitoring of material usage and the elimination of surface defect prior to application.

When taking DFT readings, it is recommended that no readings are taken within 25mm of the edge of an I section or within 25mm of the join of flange to web of an I section.

Taking the above into account, readings must be taken randomly over the remaining areas of the section with a frequency as described in 10.6 below.

10.6 Frequency of measurement

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The procedure for measuring the DFT and the acceptance criteria is based on Section 5.4 Testing, clause R630 of SCI P160,Part 2.

Sections must be measured in accordance with the following guidelines:

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(i) I Sections, Tee Sections and Channels

Webs: Two readings per metre length on each face of web

Flanges: Two readings per metre length on the outer face of each flange

One reading per metre length on the inner face of each flange.

(ii) Square and Rectangular Hollow Sections and Angles:

Two readings per metre length on each face.

(iii) Circular Hollow Sections:

Eight readings per metre length evenly spread around the section

Where members are less than 2m in length, three sets of readings shall be taken, one at each end and at the centre of the member. Each set shall comprise the number of readings on each face given by (i), (ii) or (iii) above, as appropriate.

10.7 Acceptance criteria

The coating thickness acceptance criteria shall be as follows, assuming that the specified thickness is a nominal value:

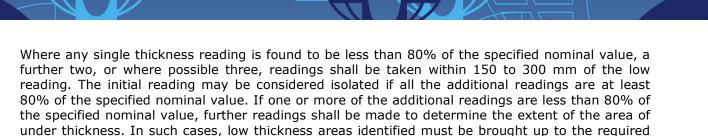
(i) The average dry film thickness applied to each element shall be greater than or equal to the specified nominal value.

(ii) The average measured dry film thickness on any face of any member shall not be less than 80% of the specified nominal value.

(iii) Dry film thickness values less than 80% of the specified nominal value are acceptable, provided that such values are isolated and that no more than 10% of the readings on a member are less than 80% of the specified nominal value.

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thickness before proceeding to the next application stage.

(iv) All dry film thicknesses shall be at least 50% of the nominal value.

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(v) The average measured dry film thickness of any face of any member should not exceed the manufacturer's recommended maximum thickness for the particular member shape and orientation.

10.8 Correction of Defective or Inadequate Coatings

Thickness correction

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The importance of dry film thickness checking is emphasized where inadequate thickness is identified prior to application of the final sealer coat / decorative top coat.

In such situations it is a relatively simple exercise to define the extent of the deficient area(s) and to apply further coat(s) of intumescent product to bring the overall thickness up to acceptable standards.

However, if low thickness is not detected until after the sealer coat / decorative top coat has been applied, detailed guidance must be sought from the intumescent coating manufacturer. In some circumstances – and with supporting test evidence – it may be possible to remedy the situation by the application of further coats of intumescent paint, but in the other extreme it may be necessary to remove previous coatings in order to build up the necessary fire protection from scratch. Where the intumescent coating thickness exceeds the limits stated in the manufacturer's recommendations, guidance must be obtained from the manufacturer.

10.9 Wet to dry film thickness ratio

Wet film readings must be taken regularly during application, using a wet film comb. These must be regarded as a guide only to enable the applicator to establish a technique for achievement of dry film thickness specification. Wet film readings must not be regarded other than a guide. During multi-coat operations wet film readings will prove unreliable hence DFT must be checked and recorded in between coats before putting next coat.

11.0 Handling, Transportation and Storage of Coated Steel **11.1** Handling and storage

During site operations damage and deterioration of the coating system can occur particularly between in-shop applications through to final erection on site. Due to the relatively high film thicknesses of intumescent coating systems, coupled with their drying mechanism, particular care must be taken during handling of steel sections. Systems must be allowed to dry for as long as possible before movement to stockyard and or site or before further coating.

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11.2 Lifting and transportation

Lifting devices must be of suitable material in order to limit the extent of mechanical damage. Contact points on the coated steel must be protected. If necessary lifting lugs must be incorporated into the fabrication process to facilitate the lifting of large or complex configurations of steel sections. For transportation of the applied sections from the fabrication yard to the erection site, the complete system with approved topcoat must be applied. Systems must be allowed to hard dry and approved before movement to site.

11.3 Resistance to water ponding

Steelmaster 1200WF coated steelwork must be protected and suitably covered to avoid water ponding. Section pieces must be stored in a horizontal position with toes down. Provide adequate ventilation and allow air circulation to facilitate thorough drying. Minimal stacking is recommended.

12.0 Site Repair and Coating procedure

Repair of coating – General Recommendation

Damage to the coating that exposes bare steel, where the damage is greater than 5cm^2 shall be dry abrasive blast cleaned to Sa $2\frac{1}{2}$ in accordance with ISO 8501-1 preferably by the use of vacuum blasting equipment.

Damage to the surface of the coating of size less than 5 cm² may be repaired by abrasive sanding or equal to roughen the surface. Damage to the coating that exposes bare steel, where the damage area is less than 5 cm² may be mechanically cleaned by abrasive sanding to a minimum standard of St 3 with a rough surface profile. Overlapping zones to intact coating shall be masked off to a minimum 200mm distance to the damaged area and the surrounding area must be covered so that overspray to the sound coating does not occur during repair application. Edges of intact coating around damage area shall be feathered to ensure a smooth transition from the coating to the prepared steel. Consecutive layers of coating shall be feathered to expose each layer and new coating shall always overlap the abraded existing layer.

When repairing Steelmaster 1200WF, the intumescent is not be applied over top coated areas. Ensure to limit the primers/ Steelmaster 1200WF/ topcoat within its own layers of coating on feathered edges.

Note: This repair procedure applies to following areas

- a) Areas of mechanical damages due to other site works.
- b) Coating damaged due to fixing additional brackets by welding
- c) Burn damages due to welding.
- d) Any other damages down to bare steel
- e) Steelmaster 1200WF surface damages.
- f) Damages caused by high humidity, moisture, entrapped air, etc causing blistering

Cut out:

Cut out the Steelmaster 1200WF coating at least five centimeters from the damaged / heat affected area, in all directions back to sound edge (large enough to allow manual/ mechanical preparation). In case of scattered spot blistering/damages caused due to water ingress, moisture, high humidity the blisters need to be cut open. Sand down the affected area, feather the edges & repair as recommended above. In case of extensive blistering/swelling of the Steelmaster 1200WF due to the above reasons the coating needs to be removed to bare/primed steel & repaired as above.

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Substrate preparation:

Ensure exposed substrate is clean, dry and free from any contamination such as grease, oil, or salt formation.

Mechanical Cleaning:

If spot blasting is restricted, manually prepare the exposed steel in accordance with ISO 8501-1:1988, cleanliness standard St3. The resulting surface must be suitably profiled to provide a key prior to coating. Care must be taken to avoid burnishing of the steel substrate.

Repair Primer:

Jotamastic 80 / Jotamastic Smart Pack @ 100 -125 µm

Patch prime exposed steel only, using Jotamastic 80 / Jotamastic Smart Pack to achieve a DFT of $100 - 125\mu m$, then allow to dry. Take care not to overlap into the adjacent Steelmaster 1200WF exposed / feathered area, by proper protection.

Repairs with Steelmaster 1200WF

Abrade an area to 50mm around the repair area with an abrasive paper to remove any topcoat that may have been applied. Reinstate the specified thickness of intumescent coating, by trowel or brush application of recommended Steelmaster 1200WF in multiple coats. Ensure that all the exposed areas of intumescent are clean and dry. Bring any shallow areas of damage back to thickness using Steelmaster 1200WF applied by brush/ trowel.

Take care not to overlap Steelmaster 1200WF into adjacent topcoat by proper protection.

Finish Coating (only to required areas)

Wherever topcoat has been specified, apply one or two coats by brush/roller to achieve the original specified DFT, after the areas have been repaired using Steelmaster 1200WF Ensure the Steelmaster 1200WF system applied is dry hard to recoat with the approved topcoat.

If only the topcoat is damaged then remove loose unsound coatings & feather the rough edges. Ensure the surface is free from contamination, sound & dry before applying the topcoat to the recommended/specified dry film thickness

13.0 Health and Safety

All personnel working with Steelmaster 1200WF should use proper personal protection equipment (PPE) in according with local regulations.

Steelmaster 1200WF, Jotamastic 80 / Jotamastic Smart Pack and Jotun approved topcoats are intended to be used by professional industrial applicators working in conjunction with the guidelines set out in this procedural manual and the Health and Safety information.

Steelmaster 1200WF should not be used without reference to the appropriate Safety Data Sheets, which are provided to all customers. It is vital that the user obtains a copy from Jotun before using the products.

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