



Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
afp - 1356	2-Nov-2000	Number 6	Issue date 1-May-2013	30-Apr-2014

Page 1 of 2

Product designation

OneSteel, FirePlus™ Medium, steel fire sprinkler/hydrant pipe

(Refer to the Schedule/enclosures for further specified details)

Agent/distributor

OneSteel Limited
Industrial Drive, MAYFIELD, NSW, AUSTRALIA, 2304

Registrant

Australian Tube Mills Pty Limited
146 Ingram Road, ACACIA RIDGE, QLD, AUSTRALIA, 4110

Producer

OneSteel Limited
Industrial Drive, MAYFIELD, NSW, AUSTRALIA, 2304

Conformance criteria and evaluation

The OneSteel, FirePlus™ Medium, steel fire sprinkler/hydrant pipe has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS 4118.2.1-1995, 'Fire sprinkler systems - Piping - General'.
2. SSL Appraisal Specification FAS-120, Version 2.0, 'Medium ERW HDG & ILG Steel Pipe, Sizes DN25 to DN150, to AS 4118.2.1 & Draft Australian Standard 2462.CDR, for Fire Protection Systems'.

Limitations/conditions of conformance

Limitations/conditions of conformance, where identified on this certificate, are derived from qualifications from evaluation(s) for conformity and/or other related technical documentation. All details with respect to design, assembly and installation instructions and restrictions should be checked against the producer's current technical manual/data sheets and the requirements of the Authority having Jurisdiction.

Specified limitations/conditions, determined from the evaluation for conformity, include the following.

- i. Fire system designers and authorities having jurisdiction must confirm that the codes or standards used for system design adequately address the hydraulic characteristics of this product.
- ii. Full hydraulic analysis is an approved and recommended method of determining that system performance will meet design requirements.
- iii. The in-line galvanised pipes shall not be used below ground.

Issued by

David Whittaker
Executive Officer – ActivFire Scheme



© CSIRO Australia, 2013

This certificate remains the property of CSIRO and may be subject to amendment, suspension or withdrawal at any time.
The validity and authenticity of this certificate can be verified by the certification register located at <http://www.activfire.gov.au>



This certification is issued within the scope of CSIRO Verification Services – Rules governing ActivFire Scheme and is valid only for the product(s) as submitted for evaluation and verification of conformity, subject to the following conditions.

- Reference to details, limitations and requirements, where documented as a schedule/enclosure with this certificate.
- The Registrant is responsible for their attestation of conformity and ensuring that on-going production complies with the conformance criteria defined in this certificate.
- This certificate will not be valid if any changes or modifications are made to the product which have not been notified and validated by CSIRO Verification Services.
- This certificate is subject to periodical re-validation upon verification that all requirements, as determined by the conformity assessment body, continue to be satisfactorily met by the Registrant.
- This certificate may only be reproduced in its published form, without modification and inclusive of all schedules/enclosures.
- Any changes, errors or omissions, must be submitted in writing and if necessary or requested, substantiated with relevant evidence.
- Any representations, such as advertising or other marketing related activities or articles shall reflect the correct contents of this certificate and conform with all relevant trade practices and consumer protection legislation and regulations.
- Any terms or conditions of use as applicable to content and documentation as published or accessed through web sites administered by the CSIRO Verification Services.

Schedule to Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
afp - 1356	2-Nov-2000	Number 6	Issue date 1-May-2013	30-Apr-2014
				Page 2 of 2

Producer's description

The OneSteel, FirePlus™ Medium, steel fire sprinkler/hydrant pipe is a medium-weight moderate to high strength steel pipe which is surface-protected by fully hot-dipped galvanising, or an external in-line galvanised coating with a conversion coating.

All listed sizes are suitable for use with rolled-groove couplings and fittings of a suitable diameter and groove profile. All listed sizes are also suitable for joining by shoulder-end coupling, by screw-threading with standard pipe threads, or by butt welding.

Details of the range of sizes and dimensional data are included in the Technical Specifications of this document.

Technical specification

The following details are a representative extract of the technical specification for the OneSteel, FirePlus™ Medium, steel fire sprinkler/hydrant pipe and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

Pipe dimensions

Nominal size DN	Nominal outside diameter	Nominal inside diameter	Nominal wall thickness	Mass per metre	
				HDG 300	ILG 100
25 mm	33.7 mm	27.3 mm	3.2 mm	2.47 kg	2.42 kg
32 mm	42.4 mm	36.0 mm	3.2 mm	3.17 kg	3.11 kg
40 mm	48.3 mm	41.9 mm	3.2 mm	3.65 kg	3.58 kg
50 mm	60.3 mm	53.1 mm	3.6 mm	5.15 kg	5.06 kg
65 mm	76.1 mm	68.9 mm	3.6 mm	6.58 kg	6.47 kg
80 mm	88.9 mm	80.9 mm	4.0 mm	8.55 kg	8.41 kg
100 mm	114.3 mm	105.3 mm	4.5 mm	12.41 kg	12.23 kg
150 mm	165.1 mm	155.1 mm	5.0 mm	20.07 kg	19.82 kg

General

OneSteel, FirePlus™ Medium, steel fire sprinkler/hydrant pipe is manufactured by using electric resistance welding and hot-dip or in-line galvanising methods in accordance with the requirements of SSL Appraisal Specification FAS-120: Version 2.0, 'Medium ERW HDG & ILG Steel Pipe, Sizes DN25 to DN150, to AS 4118:Part 2.1 and draft Australian Standard 2462.CDR, for Fire Protection Systems'.

Leak-tightness

The leak-tightness and integrity of the weld is ensured by 100% testing with eddy-current or ultrasonic type flaw-detection equipment.

Galvanising

The hot-dip or in-line galvanised coatings are applied in accordance with AS/NZS 4792 Coating Classes HDG 300 or ILG 100 respectively. The HDG and IGL coatings have a minimum average coating mass per square metre of 300 or 100 grams respectively. Both the external and internal surface of the HDG300 pipes are galvanised. Only the external surface of the ILG 100 pipes is galvanised, but a "conversion coating" is applied over the zinc coating to protect it from "white rust".

Steel properties

Steel property	Steel grade		
	200L0	240L0	290L0
Yield strength (MPa) minimum	200	240	290
Ultimate tensile strength (MPa) minimum	320	380	415
Minimum elongation (%) where gauge length = $5.65 \cdot (S_0)^{0.5}$	18	15 (Notes 1 & 2)	15 (Notes 1 & 2)

Note 1: The elongation limit shall not apply to pipe whose outside diameter is 33.7 mm or smaller. However, the values shall be recorded.

Note 2: The minimum elongation figures specified apply only to testing performed prior to shipment because of the possibility of strain aging. Tests performed after shipment may show values below those stated.