



Report No	2244/8197656	This Report consists of 13 pages
Client	UAB Merseta K.Dulksnio 9 Narsieciai Kaunas LT-53304 Lithuania	
Authority & date	BSI Service Management Order No. 8197656 dated 29 July 2014. Equipment Record No. 10147027	
Items tested	Aerosol Fire Extinguishers	
Specification	BS 6165:2002 Direct Testing	
Results	Pass- See Summary of Results on Page 2	
Prepared by	 M Livingston	Engineer
Authorized by	 M Goodchild	Team Manager
Issue Date	2 June 2016	
Conditions of issue	<p>This Test Report is issued subject to the conditions stated in the current issue of EMCP100 'Conditions of Contract for Testing'. The results contained herein apply only to the particular sample/s tested and to the specific tests carried out, as detailed in this Test Report. The issuing of this Test Report does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of any product. No extract, abridgement or abstraction from a Test Report may be published or used to advertise a product without the written consent of the General Manager, BSI, who reserves the absolute right to agree or reject all or any of the details of any items or publicity for which consent may be sought.</p>	



0135

TESTING, EXAMINATION AND ASSESSMENT OF AEROSOL FIRE EXTINGUISHERS SUBMITTED AS TYPE TEST SAMPLES

INTRODUCTION

For the purposes of product certification the aerosol fire extinguishers detailed below, submitted on behalf of UAB Merseta, received on 29 July 2014, were tested and assessed against limited requirements of BS 6165:2002, as indicated on the following pages of this Test Report. This request was made on a BSI Management Order. It is emphasized that assessments were not made against the other clauses of the Specification.

The tests and assessments contained in this Test Report were undertaken at BSI Fire Safety Laboratory from 14 November 2014 to 5 May 2016.

Clauses 4, 5.1, 5.2, 5.3, 5.4 and 8 are not part of BSI's UKAS accreditation.

TEST ITEM

Model:	STOP FIRE Reinhold Max 500ml
Description:	500ml, Towalex AFFF 1%, stored pressure
General Assembly drawing:	Drawing RM500 dated 01.07.2012

SUMMARY OF RESULTS

The test samples met the requirements of those clauses, or parts thereof, of the Specification against which assessments were made.

All measured results indicated with an ** are below/above the specified limit by a margin less than the measurement uncertainty; it is therefore not possible to state compliance/non-compliance with the specification. For this reason this report is issued with the results only where applicable. All other results are unaffected with this.

EXAMINATION AND TEST

CLAUSE

ASSESSMENT

4 CONTENTS OF THE EXTINGUISHER

4.1 Extinguishing medium

The extinguishing medium shall be one of the following:

- Water-based, including foam;

Pass

- Powder conforming to BS EN 615.

Not applicable

4.2 Propellant

Only propellants listed in Table 1 or mixtures thereof shall be used. The maximum water content shall be as specified in Table 1, except when used in stored pressure water-based portable fire extinguishers. Tracers may be added to the propellant to facilitate leakage detection, but the content shall not exceed a mass fraction of 5% of the propellant content.

Pass*

* Declared by manufacturer

EXAMINATION AND TEST (CONTINUED)

CLAUSE		ASSESSMENT
5	CONSTRUCTION	
5.1	Operation	
5.1.1	The extinguishers were operated by depression of a valve. The method of operation was readily apparent. It was not necessary for any movement of the actuating mechanism to be repeated in order to initiate discharge.	Pass
5.1.2	The extinguishers were operated without inversion.	Pass
5.1.3	The extinguishers incorporated a device to prevent inadvertent operation, which was so constructed that any unaided manual attempt to initiate discharge did not deform or break any part in a way that prevented the subsequent discharge of the extinguisher.	Pass
5.1.4	The extinguishers had a tamper evident seal, which was broken in the removal of the safety device. This seal was such that it would not be broken or damaged in normal service and could not be replaced after operation. A paper seal was not used.	Pass
5.1.5	The extinguishers incorporated a controllable device to enable the discharge to be interrupted.	Pass
5.2	Mounting	
	The extinguishers were provided with a means for mounting.	Pass
5.3	Body and closure	
5.3.1	Body	
5.3.1.1	The body had a brimful capacity not exceeding 950 ml and an internal diameter not exceeding 75 mm.	Pass
5.3.1.2	The body was cylindrical with axially symmetrical concave or convex ends, and was of seamless construction or of seamed construction with seams that were welded or brazed or double seamed or swaged.	Pass

EXAMINATION AND TEST (CONTINUED)

CLAUSE		ASSESSMENT
5.	CONSTRUCTION (CONTINUED)	
5.3	Body and closure (continued)	
5.3.2	Closure	
	The closure shall be swaged under the neck ring of the body. The swage diameter and the actual swage depth shall not differ by more than ± 0.25 mm from the manufacturers specified nominal values.	Pass
5.4	Nozzle cap	
	Any protective cap fitted to the nozzle shall be removed or ruptured by the discharge of the contents when the extinguisher is operated.	Pass
5.5	Corrosion resistance	
	After storage in accordance with Annex B, an extinguisher shall not show signs of corrosion or other chemical degradation other than staining or discolouration, and the extinguisher shall operate as intended.	Pass
5.6	Impact resistance	
	The extinguisher (with overcap if used) correctly charged and equipped with all fittings that are subject to internal pressure in normal operation shall not release pressure in a potentially dangerous manner when tested in accordance with Annex C.	Pass
5.7	Resistance to shock and mechanical damage	
	The extinguisher shall show no perceptible leakage permitting loss of pressure when tested in accordance with Annex D.	Pass

EXAMINATION AND TEST (CONTINUED)

CLAUSE		ASSESSMENT
5.	CONSTRUCTION (CONTINUED)	
5.8	Resistance to internal pressure	
	<p>The body withstood an internal pressure equal to the equilibrium pressure + 1.4 bar, or to 10.0 bar, whichever was the greater, without visible permanent deformation when tested in accordance with E.1.*</p> <p>* Deviation from standard test method. Due to the practicalities of maintaining the pressure for a period within the required tolerance of +0.5/-0 seconds, a tolerance of +2/-0 seconds was used.</p>	Pass
5.9	Minimum burst pressure	
	<p>The burst pressure of the body, fitted with all pressure retaining parts, was not less than twice the equilibrium pressure or 18 bar, whichever was the greater, when tested in accordance with E.2. The body did not fragment or throw any parts in a dangerous manner.</p>	Pass
5.10	Pressure Indicator	
	<p>A pressure indicator, where fitted, shall have a green zone (working zone), covering the equilibrium pressure at 55°C and 75% of the working pressure at 20°C with a tolerance of +1 bar</p>	Not applicable
6	PRODUCTION REQUIREMENTS	
6.2	Filling tolerance	
	<p>The filling tolerance was $\pm 5\%$ for powder fire extinguishers.</p>	Not applicable
	<p>The filling tolerance was +Nil, - 5% for water based fire extinguishers</p>	Pass
7	PERFORMANCE	
7.1	Delay on operation	
	<p>Not more than 2 seconds elapsed between the depression of the valve and commencement of discharge when tested in accordance with F.1.</p>	Pass

EXAMINATION AND TEST (CONTINUED)

CLAUSE		ASSESSMENT
7.2	Duration of discharge	
	The duration of effective discharge was not less than 6 seconds when tested in accordance with F.1.	Pass
7.3	Minimum discharge of contents	
	The extinguisher when operated in its normal working position did not discharge less than 85 % (m/m) of the nominal charge when tested in accordance with F.1.	Pass
7.4	The rate of leakage before and after storage in accordance with Annex B did not exceed a rate of loss of pressure equivalent to 5% of the working pressure per annum	Pass
7.5	Retention of charge following partial discharge	
	The second mass was not less than 80% of the first when tested in accordance with Annex G.	Pass
7.6	Fire Extinguisher Performance Rating	
7.6.1	Class B rating	
	The extinguisher shall have a class B rating test fire rating which shall be the determined by the test method described in H.5	Pass*
7.6.2	Class A rating	
	If appropriate, the class A rating of the extinguisher shall be determined by the test method described in H.4	Pass*
	* Refer to MPA Test Report 2012-F-5574/MS10 dated 14 January 2013	

EXAMINATION AND TEST (CONTINUED)

CLAUSE		ASSESSMENT
9	COLOUR AND MARKING OF EXTINGUISHERS	
9.1	Primary information	
9.1.1	The extinguisher was marked with the following:	
a)	The words "Fire extinguisher" in letters of height not less than 7 mm.	Pass
b)	The words "For small fires only" in letters of height not less than 3 mm.	Pass
c)	The method of operation in words with letters of height not less than 3 mm.	Pass
d)	The types of fire for which the extinguisher is suitable.	Pass
e)	The types of fire for which the extinguisher is not suitable, including the words: "THIS EXTINGUISHER IS NOT SUITABLE FOR USE ON DEEP FAT FIRES"	Pass
f)	An instruction to discard the extinguisher if the tamper evident indicator is broken or missing, after use and after the expiry date marked on the extinguisher.	Pass
9.1.2	All the markings specified in 9.1.1 were visible when the extinguisher was correctly mounted, as recommended by the manufacturer, in its means for mounting.	Pass
9.2	Secondary information	
9.2.1	The extinguisher was marked with the following:	
a)	The manufacturer's or vendor's name and address.	Pass
b)	Instructions to check the pressure indicator, where fitted, regularly for operational serviceability including an instruction to dispose of the extinguisher if its pressure at 20 °C falls below the pressure corresponding to the pressure outside the green zone.	Not applicable
c)	The service expiry date which was not later than the end of the fifth year after filling.	Pass
d)	The number and date of this Standard, i.e. BS 6165:2002	Pass

EXAMINATION AND TEST (CONTINUED)

CLAUSE		ASSESSMENT
9	COLOUR AND MARKING OF EXTINGUISHERS (Continued)	
9.2	Secondary information (continued)	
9.2.1	The extinguisher was marked with the following (continued):	
e)	The class of fire and fire rating achieved.	Pass
f)	The nominal mass and type of extinguishing medium.	Pass
g)	The instruction "Keep out of the reach of young children".	Pass
h)	Instructions for the correct method of disposal once the expiry date is reached or if the extinguisher is partly discharged.	Pass
i)	The instruction "Not to be refilled".	Pass
j)	The instruction "Pressurized container: protect from sunlight and other sources of heat and do not expose to temperatures exceeding 60 °C. Do not pierce or burn, even after use.	Pass
	The letter height was not less than 1.2 mm and the markings specified in g), h), i) and j) had a letter height greater than that used for the markings specified in a), b), c), d), e) and f).	Pass
9.2.2	The markings specified in 9.2.1 were marked on a part of the extinguisher separate from that bearing the markings specified in 9.1.1.	Pass

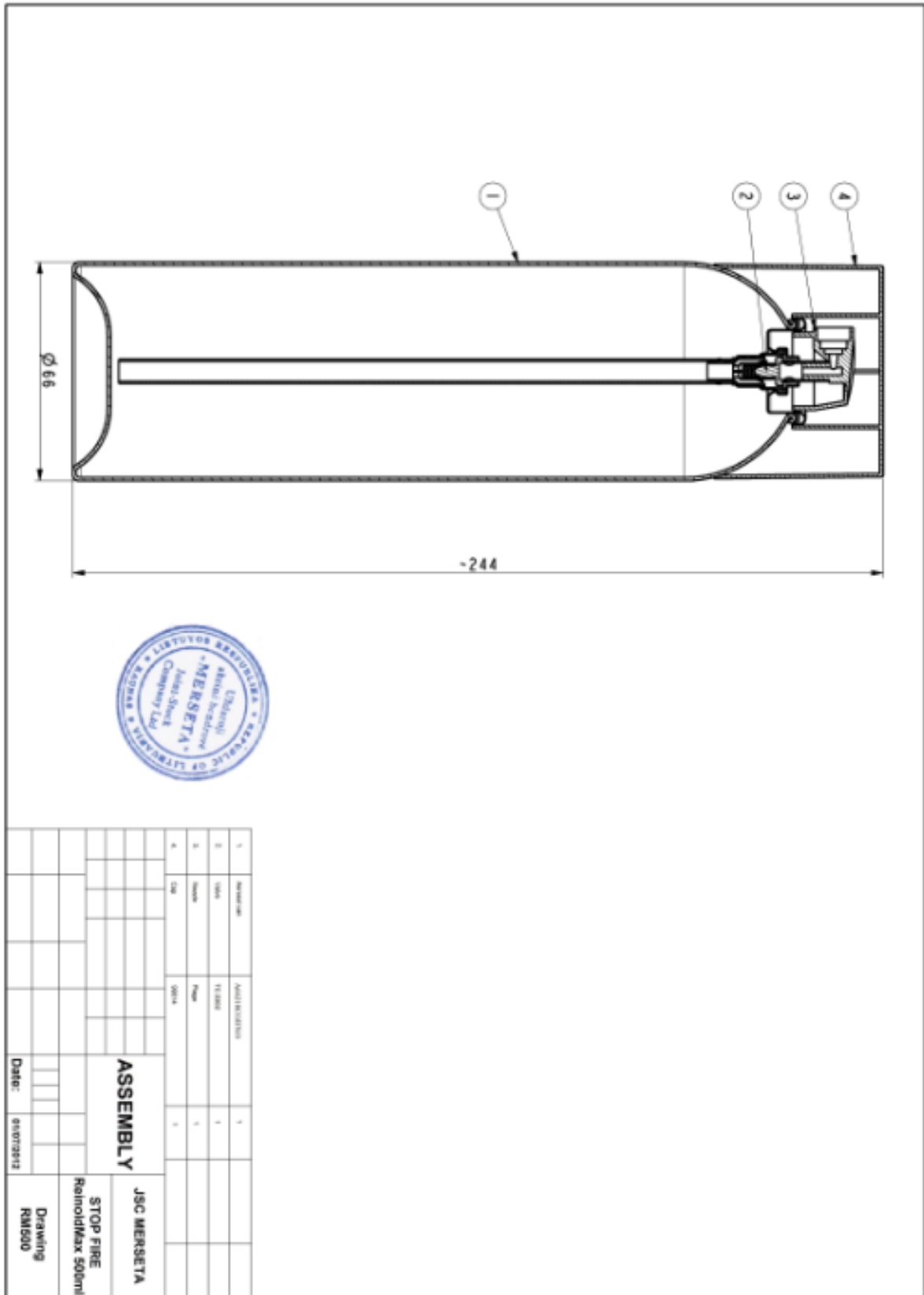
Annex A – Foam analysis to EN1568

First component

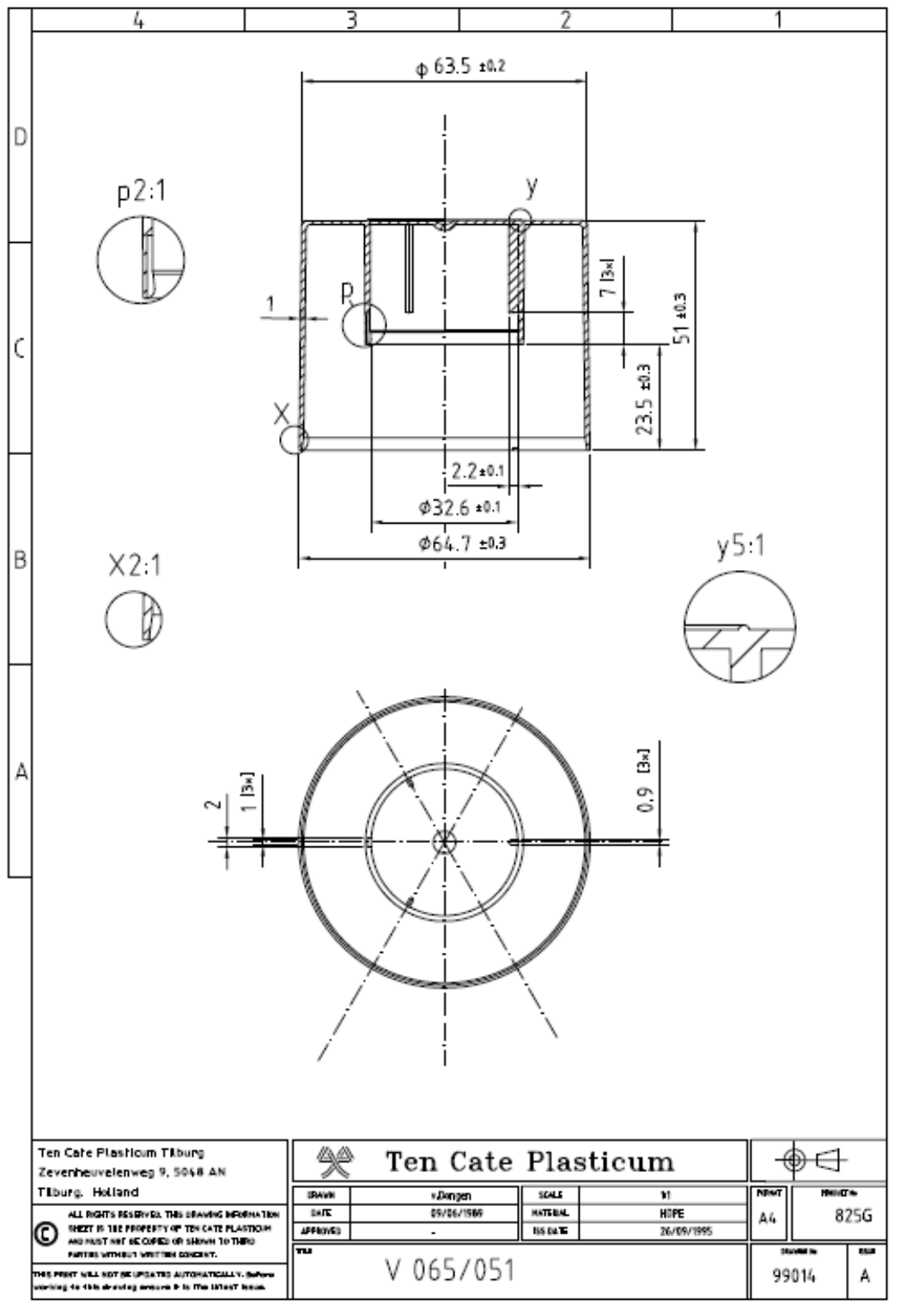
Characteristics	Manufacturer's Specification	Sample Measurement	Within Specification (yes/no)
Commercial name: Towalex AFFF 1%			
Density in kg/dm ³ at 20 ± 2°C	-	1,006	-
Viscosity in mm ² /s at 20 ± 2°C	-	1,32	-
Refractive index at 20 ± 2°C	-	1,3330	-
N _D 20			
pH at 20 ± 2°C	-	8,04	-
Conformity according to Manufacturer's specification (yes /-no)			
An infrared spectrogram was supplied for future comparison			

Please note; Results obtained from MPA Test report 2012-F-5574/MS10 dated 14 January 2014

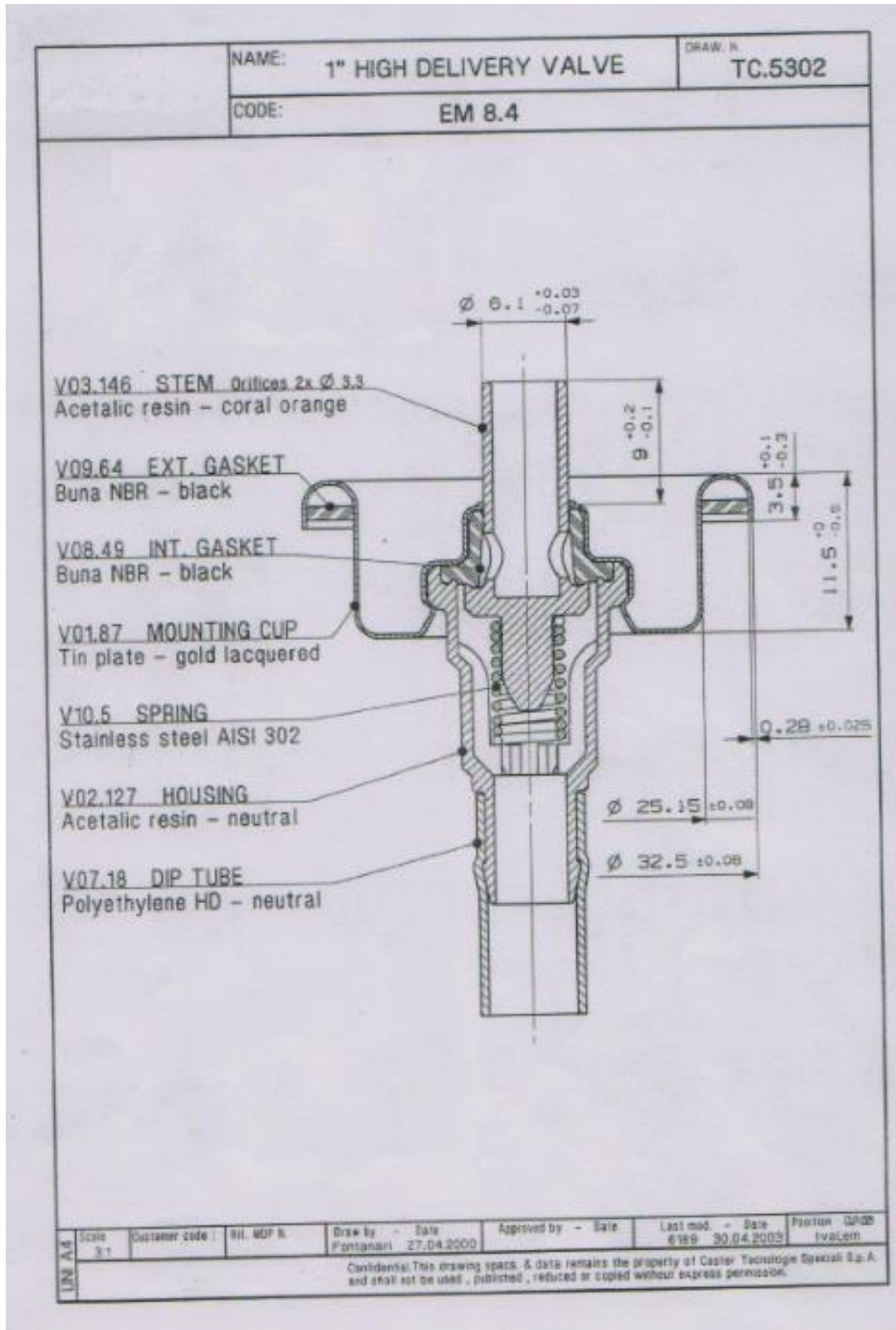
Annex B1 – General assembly drawing



Annex B2 – Component drawing



Annex B2 – Component drawing



END OF TEST REPORT