RAPIDPRESS

VIBRATION TEST

Supplying to all of **New Zealand**

THEMETALCOMPANY

RAPIDPRESS

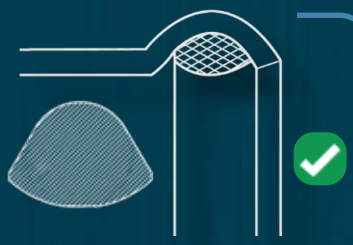
RAPID INSTALLATION MADE EASY!

INTELLECTUAL PROPERTY PATENTED

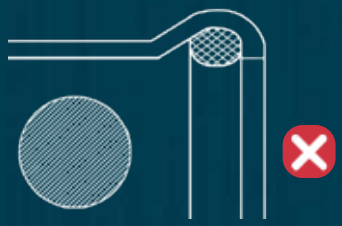
LENTICULAR SEAL

20%

MORE SEAL COVERING + EASIER TO INSERT



RAPIDPRESS



OTHER BRANDS

CATALOGUE & TECHNICAL GUIDE AVAILABLE

SCAN TO VIEW THE TECHNICAL GUIDE

FULL RANGE OF PRESS-FIT AVAILABLE ONLINE

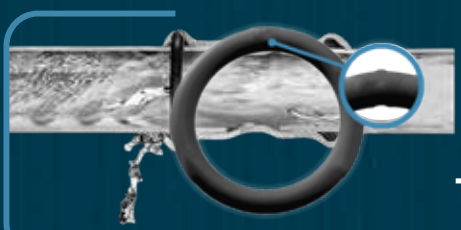
SCAN TO VIEW FULL PRODUCT RANGE

CUT | DEBURR | WITNESS MARK | ASSEMBLE | PRESS

SEE TECHNICAL GUIDE FOR FULL PROCESS

TEST CERTIFICATES AVAILABLE

Indelibly marked with heat number



LEAK BEFORE PRESS SEAL UP TO 54MM

DVGW

WaterMark

RAPIDPRESS

Supplying to all of **New Zealand**



INOX RAPIDPRESS

Stainless grade 304 & 316
Pressure rating 16 bar
-20 / +120°c

INOX EXTREME RAPIDPRESS

Stainless Grade 304 & 316
Pressure rating 16 bar
-20 / +220°c

INOX GAS RAPIDPRESS

Stainless Grade 316
Pressure rating 5 bar
-20 / +70°c

INOX STEAM RAPIDPRESS

Stainless Grade 316
Pressure rating 7 bar
-20 / +165°c

HUGE SIZE RANGE

Diameters (mm)

15	76
22	88.9
28	108
35	139
42	168
54	

APPLICATIONS

- Potable Water
- Fire Protection
- Compressed Air
- Cooling
- Heating
- Wastewater
- Natural Gas
- Solar Thermal
- Process Water
- Steam

ITALIAN MADE

3rd largest press fit manufacturer in the world!

TOOLING

RapidPress crimping tools are available for hiring or purchase.

NATIONWIDE DELIVERY

Supplying to all of New Zealand

SAME DAY DISPATCH

On courier orders before 4:00pm

FREE COURIER

On all website orders over $50+GST for Trade Account

FREE

ORDER ONLINE 24/7

View our entire range at **www.themetalcompany.co.nz/rapidpress**

THEMETALCOMPANY

About The RapidPress System

With the **RapidPress INOX** Stainless Steel press fit system for potable water, compressed air, steam and gas installations, **RapidPress Steel** for closed hot water heating systems, **RapidPress Copper** for potable water and gas installations and **RapidPress Copper-Nickel** for marine sector, **RapidPress** offers a comprehensive press-fit range in the dimension range from 12 - 168.3 mm OD, together with piping pressing tools and accessories.

What are the benefits?

RELIABILITY
Our RapidPress system is designed to be used with M profile press jaws. The pressing tools have built-in safety features to ensure a consistently perfect press and complete seal every time.

EFFICIENCY
Rapid Installation. The assembly process is simple, easy, and user-friendly, and does not require qualified welders.

QUALITY
RapidPress products are made from high-quality stainless steel grade 316L, which is highly resistant to corrosion and meets the WaterMark™ certification. The standard black EPDM O-rings are resistant to aging, heat, and chemical additives.

LENTICULAR SEAL
Our Patented Lenticular seal profile allows for 20% more sealed surface area than other seals, and is easier to insert. Up to 54mm features leak before press seals, and various seal materials are available, including EPDM, FKM, and HNBR.

TEST CERTIFICATES
We are the only press-fit supplier able to supply test certificates for all fittings and tubes. Each fitting is Indelibly marked with a heat number.

SAFETY
The RapidPress system eliminates naked flames, hot work permits, gas bottles, fire hazards, and heavy installation equipment, making it easier to comply with safety requirements.

LABOUR SAVING
RapidPress saves time and reduces labour costs by requiring fewer installation hours on site and lower skilled tradesmen to carry out installations.

CONSISTENCY
Every connection in the installation is uniform and consistent, eliminating the need for re-work due to inconsistency of connection quality.

Product Range	Material	O-Ring	Diameters	Min/Max Degrees Celsius & Pressure	Note
RAPIDPRESS INOX	STAINLESS STEEL	EPDM	Ø 15 - 168.3 mm	-20 / +120°C 16 bar Max 16 bar	Ø139.7 - 168.3mm Oversize
RAPIDPRESS EXTREME	STAINLESS STEEL	FKM	Ø 15 - 108 mm	-20 / +220°C 16 bar Max 16 bar	FKM Seal
RAPIDPRESS GAS	STAINLESS STEEL	NBR - HNBR	Ø 15 - 108 mm	-20 / +70°C 5 bar Max 5 bar	Methane, Natural Gas & LPG
RAPIDPRESS STEAM	STAINLESS STEEL	STEAM	Ø 15 - 54 mm	-20 / +165°C 7 bar Max 7 Bar	--

Stainless Steel Inox Specifications

GENERAL APPLICATION

RapidPress INOX press fittings are made of high-alloyed austenitic stainless Cr-Ni-Mo steel (AISI 316L/1.4404) and marked with the manufacturer name, diameter, DVGW test symbol, and internal code. The press fittings come with a black EPDM seal ring standardly fitted. These high-quality components are perfect for heating, cooling, compressed air, oil, and diesel lines in various sectors, including food & beverage, industrial, civil, and manufacturing.

Pressure & Temperature Rating

- Standard Maximum operating pressure: 230PSI / 16Bar
- Up to 928PSI / 64Bar available on approved applications.
- Operating temperature: -20°C / +120°C
- Maximum temperature: 220°C with RapidPress Extreme.

Manufacturing Standards

The RapidPress system uses metric size fittings and tube which is made to standard:

- **EN10217-7**
- **EN10312**

WaterMark™ Approval

The RapidPress system is WaterMark™ approved for use with potable water when using stainless steel grade 316L. This certifies the product complies with the plumbing code and the relevant standards.

In this range

45° & 90° Elbows, Spiggots & Wing Backs
Tee's
Couplers
Unions
Adapters - BSP, Tri Clover & RJT
Metric RapidPress Tube
Valves
Flanges
Clamps
RapidPress Extreme
RapidPress Tools
RapidPress Pressing Tools

Tooling

RapidPress crimping tools are available for hire or purchase.

Seal Specifications

BLACK EPDM 0-RING SEAL

The black EPDM rubber seal is standard for stainless steel and carbon steel systems. EPDM is suitable for temperatures between -20 and +120 °C and for pressures up to a maximum of 230PSI / 16Bar. It has a host of applications and is used for drinking water, heating, cooling, steam, fire fighting, compressed air (oil free) and inert gas systems.

GREEN FKM 0-RING SEAL

The green FKM seal is used in high temperature or with harsh chemicals. It is suitable for temperatures between -20 and +220 °C and for pressures up to a maximum of 230PSI / 16Bar.

YELLOW HNBR O-RING SEALS

The yellow HNBR seals are used with our gas rated press-fit system as they are resistant to ageing and heat. They are suitable for temperatures between -20°C and +70°C, and for pressures up to a maximum of 70 PSI or 5Bar.

WHITE STEAM O-RING SEALS

The White seals are used for saturated steam press-sit system suitable for temperatures between –20 and 165°C and a maximum pressure of 7 absolute bars. The STEAM o-ring is compatible with hydrocarbons, oils and other aggressive substances.

Available Sizes

METRIC TUBE & FITTINGS

The RapidPress system uses metric size fittings and tube. Below are common stocked sizes in stainless steel grade 316L including 15, 22, 28, 35, 42, 54, 76.1, 88.9, 108, 139.7 and 168.3.

Size	Outside Diameter	Wall Thickness
15	15.0 mm	1.0 mm
22	22.0 mm	1.2 mm
28	28.0 mm	1.2 mm
35	35.0 mm	1.5 mm
42	42.0 mm	1.5 mm
54	54.0 mm	1.5 mm
76	76.1 mm	1.5 mm
88.9	88.9 mm	2.0 mm
108	108.0 mm	2.0 mm
139.7	139.7 mm	2.0 mm
168.3	168.3 mm	2.0 mm

Contents

Report n. 15225	Rev. 01	Data emissione / Issue date 26/2/2024

Titolo / Title

Test Results of shock impact on a series of stainless steel accessories made by RACCORDERIE METALLICHE.

Autori / Authors

F.Gaggero

Sommario / Abstract

This report describes the results of the shock impact tests for the qualification of a series of accessories made by RACCORDERIE METALLICHE.

The tests were carried out using the medium weight shock machine of the CETENA laboratory in Riva Trigoso, accorlding to specifications of RACCORDERIE METALLICHE SpA.

This report is the english version of Cetena Test report 11378 Rev 00.

This report cancels and replaces Cetena Test Report 15225 Rev. 00.

Autori / Authors	Verificato / Verified	Approvato / Approved
		

Circolazione / Circulation

Interna / Internal Only

Libera / Free

X Riservata Industriale / Commercial in confidence

Classificata / Classified

Codici di distribuzione / Distribution codes

Raccorderie Metalliche SpA

Pagine / Sheets	Commessa / Job	Note / Notes
27	69170424021	ENG

1.0 Purpose

This technical report contains the results of the impact tests for the qualification of a series of stainless-steel items/ components of the company RACCORDERIE METALLICHE.

The tests were carried out using the medium weight shock machine of the CETENA Laboratory in Riva Trigoso.
The tests were directly requested by RACCORDERIE METALLICHE SpA, with acceptance via email on 4/07/2012 in reference to Cetena statement offer no 142/12.
The tests were requested directly by RACCORDERIE METALLICHE SpA, with acceptance via e-mail dated 4/07/2012 with reference to our offer n°142/12.
The test specifications according to NAV 30 A001 for shock test

2.0 Descripition of the Tested Components

The tests concerned the following RM Inoxpress stainless steel components:
Item of test assembly:

- 88 3pc Ball Valve
- 76 3pc Ball Valve
- 33 3pc Ball Valve
- 108 - 76 Reducing Tee
- 76 Bend
- 54 Bend
- 54 - 35 Reducing Coupler
- 108 - 88 Reducing Coupler
- 108 - 54 Reducing Coupler
- 88 PN16 Flange
- 76 PN16 Flange
- 35 PN16 Flange

For details of items tested, please refer to the official Raccorderie Metalliche Catalogue. All the items under test was mounted on the basement rigidly.

3.0 Environmental Shock Test

3.1 - Test Classification

According to the reference legislation and according to the contractual specification, the items under test are classified as Class 'A' (equipment essential for the safety and operational efficiency of the ship), and Grade I (equipment not protected by resilients), so the components will be characterized by the A-I index.
The Raccorderie Metalliche Parts Assembly of were clamped on a plate attached to the support surface of the test shock plate.

3.2 - Test Plate Installation and Shock Assembly Fitting

Annex 2 shows the overall drawing of the parts assembly stainless-steel made.
The assembly chosen for mounting on the shock test machine has the purpose of fully transmitting the impact to the system, which is the subject of the test.
The assembly, was fixed to the anvil plate using the number of "channel " required by the relevant legislation.

3.3 - Operation Mode of Test Assembly

The assembled components with their pipe sections (as per the attached drawings) pressurized with water. The water pressure was then monitored by means of a pressure gauge to check the absence of significant leaks.

3.4 - Test Execution

The assembled parts were first mounted in normal condition on the anvil plate of the shock machine and subjected to a first series of three shocks defined by two hammer drop heights and two strokes of the anvil plate; Then the assembly was mounted inclined on the shock machine, interposing a 30-degree inclined plane. In this new configuration, a further three shocks were performed with two increased hammer heights and two free strokes of the anvil plate. The heights of the hammer, in accordance with the contractual specifications, are those tabulated in the reference standard according to the total weight weighing on the anvil plate and are determined at the time of installation of the assembly on the impact machine after calculating the actual total weight (See table N.1 of NAV – 30 – A001 below).

Group n.	**1**	**2**	**3**
Anvil Run (mm)	**76**	**76**	**38**
Weight Under Test (1) full assembly (Kg)	Fall Height (cm)		
115 ± 450	25	55	55
450 ± 900	30	60	60
900 ± 1350	40	70	70
1350 ± 1600	45	80	80
1600 ± 1800	55	85	85
1800 ± 2000	60	95	95
2000 ± 2200	65	110	110
2200 ± 2400	75	130	130
2400 ± 2600	80	170	170
2600 ± 2800	90	170	170
2800 ± 3000	100	170	170

(1) The fall heights are set by the total weight on the anvil. Therefore, since the weight of the fixing and support structures is different in the two straight and inclined series, the heights may vary even for tests on the same specimen

3.5 Test Conditions

The components assembled with the relevant pipe sections (as per the attached drawings) were put under pressure with water.
The pressure was then monitored using a manometer to check for the absence of significant leaks.
Before and after being subjected to the prescribed tests on the impact machine, the equipment was subjected to functional tests.

3.6 - Criteria for Passing the Test

The test was considered “passed” as the system was substantially intact in every part and the static pressure did not fall below 10% of the operating pressure.

3.7 - Documentation of the Shock Test

At the end of the test, a document was issued Test Data Sheet (see attachment section) certifying the execution of the tests and the outcome of the test itself with the signature of the persons in charge present. This document is fully annexed to this report.

4 - Results

The following items:

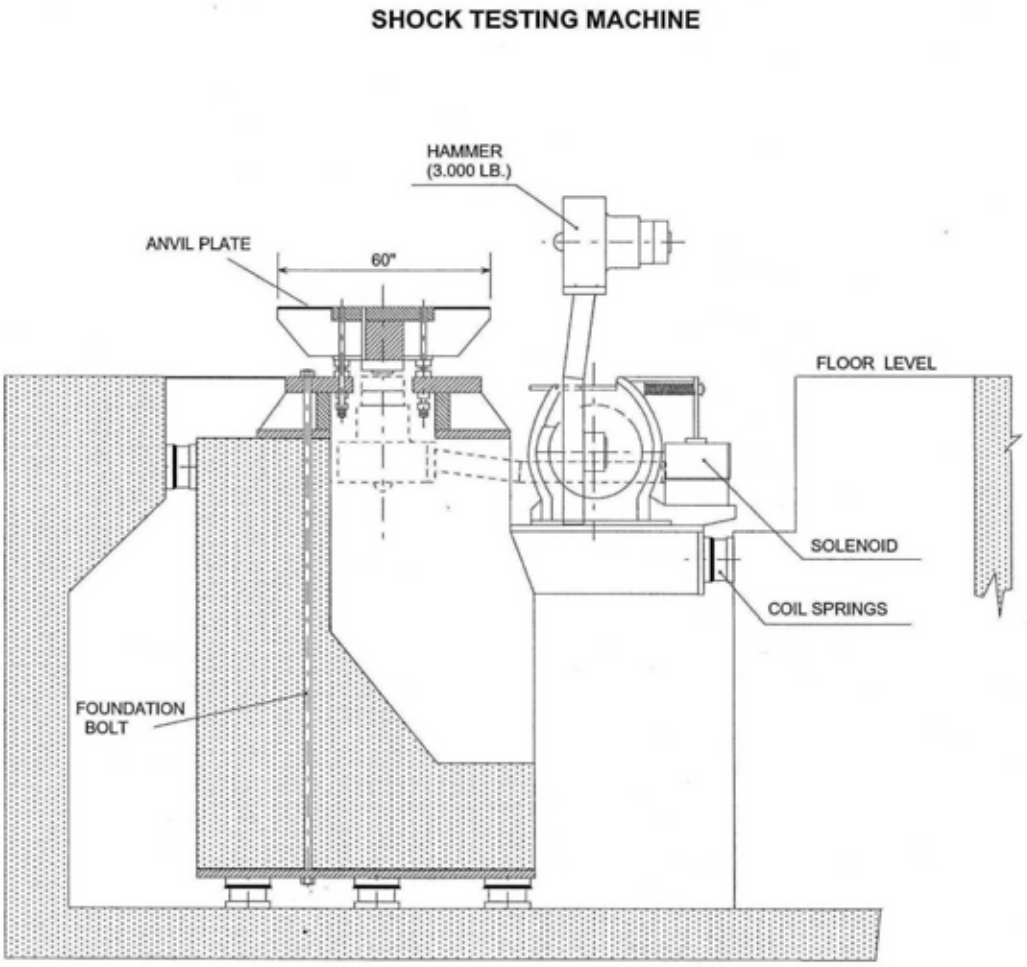
- 88 3pc Ball Valve
- 76 3pc Ball Valve
- 33 3pc Ball Valve
- 108 - 76 Reducing Tee
- 76 Bend
- 54 Bend
- 54 - 35 Reducing Coupler
- 108 - 88 Reducing Coupler
- 108 - 54 Reducing Coupler
- 88 PN16 Flange
- 76 PN16 Flange
- 35 PN16 Flange

No damage observed was reported during the shock tests

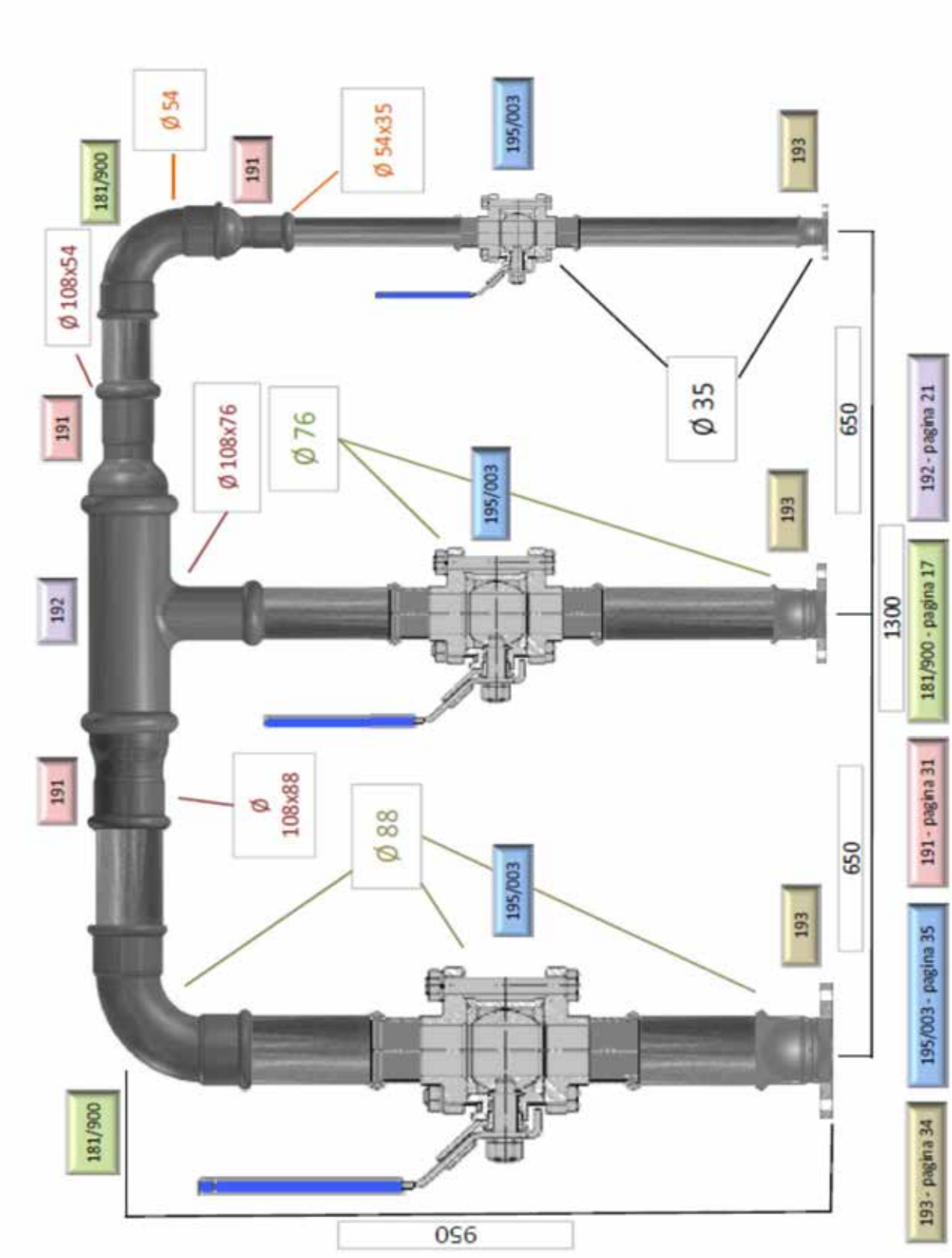
5- Attachments

1. Drawing of Shock Test Machine
2. Drawing of Assembly in Shock Test
3. Photographs
4. Test Data Sheet
5. Copy of the Test Report

5.1 - Drawing of Shock Test Machine



5.2 - Assembly Drawing



5.3 - Photographs

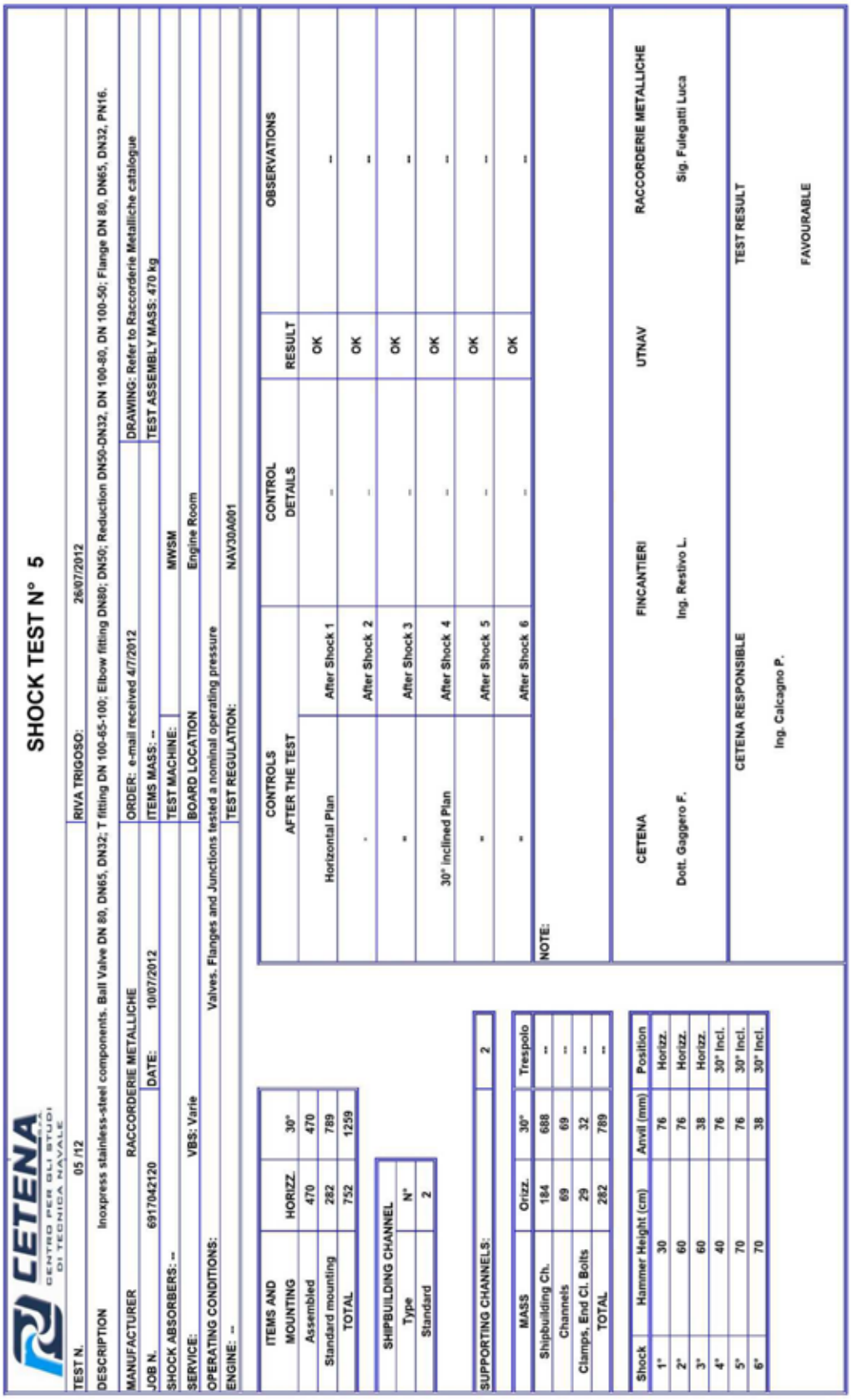
Figure 1 – Assembly on Horizontal Plate

Figure 2 – Assembly on 30° Inclined Orientation

Figure 3 – Assembly on 30° Inclined Orientation

Figure 4 – Pressure Gauges

5.4 - Test Data Sheet



CETENA
CENTRO PER GLI STUDI DI TECNICA NAVALE

SHOCK TEST N° 5

TEST N.	05 /12	RIVA TRIGOSO:	26/07/2012
DESCRIPTION	Inoxpress stainless-steel components. Ball Valve DN 80, DN65, DN32; T fitting DN 100-65-100; Elbow fitting DN80; DN50; Reduction DN50-DN32, DN 100-80, DN 100-50; Flange DN 80, DN65, DN32, PN16.		
MANUFACTURER	RACCORDERIE METALLICHE	ORDER: e-mail received 4/7/2012	DRAWING: Refer to Raccorderie Metalliche catalogue
JOB N.	6917042120	DATE: 10/07/2012	ITEMS MASS: --	TEST ASSEMBLY MASS: 470 kg
SHOCK ABSORBERS: --			TEST MACHINE:	MWSM
SERVICE:	VBS: Varie		BOARD LOCATION	Engine Room
OPERATING CONDITIONS:	Valves, Flanges and Junctions tested a nominal operating pressure			
ENGINE: --			TEST REGULATION:	NAV30A001

ITEMS AND MOUNTING	HORIZZ.	30°
Assembled	470	470
Standard mounting	282	789
TOTAL	752	1259

SHIPBUILDING CHANNEL	
Type	N°
Standard	2

SUPPORTING CHANNELS:		2
MASS	Orizz.	30°	Trespolo
Shipbuilding Ch.	184	688	--
Channels	69	69	--
Clamps, End Cl. Bolts	29	32	--
TOTAL	282	789	--

Shock	Hammer Height (cm)	Anvil (mm)	Position
1°	30	76	Horizz.
2°	60	76	Horizz.
3°	60	38	Horizz.
4°	40	76	30° Incl.
5°	70	76	30° Incl.
6°	70	38	30° Incl.

CONTROLS AFTER THE TEST		CONTROL DETAILS	RESULT	OBSERVATIONS
Horizontal Plan	After Shock 1	--	OK	--
"	After Shock 2	--	OK	--
"	After Shock 3	--	OK	--
30° inclined Plan	After Shock 4	--	OK	--
"	After Shock 5	--	OK	--
"	After Shock 6	--	OK	--

NOTE:

CETENA	FINCANTIERI	UTNAV	RACCORDERIE METALLICHE
Dott. Gaggero F.	Ing. Restivo L.		Sig. Fulegatti Luca

CETENA RESPONSIBLE	TEST RESULT
Ing. Calcagno P.	FAVOURABLE

5.5 - Copy of Test Report

CETENA S.p.A.
CENTRO PER GLI STUDI DI TECNICA NAVALE

CERTIFICATO DI PROVA D'URTO SHOCK TEST CERTIFICATE	5/12	Eseguito a RIVA TRIGOSO il Test carried out at RIVA TRIGOSO on	26/07/2012
Test richiesto da Test requested by	**Raccorderie Metalliche SpA**		PAGINA/PAGE 1/2
Descrizione dell'esemplare in prova Description of the tested item	**Inoxpress stainless-steel components. Ball Valve DN 80, DN65, DN32; T fitting DN 100-65-100; Elbow fitting DN80; DN50; Reduction DN50-DN32, DN 100-80, DN 100-50; Flange DN 80, DN65, DN32, PN16.**		
Unità / Unit: --			
Ditta fornitrice Manufacturer	RACCORDERIE METALLICHE	Dis N° Drawing N°	Refer to Raccorderie Metalliche catalogue
		Matricola N° S/N	--
Locazione a bordo Onboard Location	Engine Room	Servizio Service	--
Grado di resistenza esemplare Item Shock grade	A	Tipo della Prova Shock test type	A1
Tipo di Esemplare Item type		Macchina Impiegata/Machinery used Shock testing machine for medium weight equipment MWSM in RIVA TRIGOSO laboratory	
Tipo Resilienti Resilient mounts type	--	Peso Esemplare Item weight	Peso in Prova Total weight during the test 470 kg
Condizioni di Funzionamento Working conditions	Valves. Flanges and Junctions tested a nominal operating pressure		
Normativa di Prova Test Rules	NAV30A001	Eccezioni alla Normativa Test Rules exception	--
Esito della Prova Test result	Superata The equipment has satisfied the test		
Eventuali Suggerimenti Suggestions	--		
Collaudo Funzionale eseguito da Functional test performed by	CETENA	Presso At	CETENA Documento Document --
Prova D'integrità eseguita da Integrity test performed by	RM SpA	Presso At	CETENA Documento Document --
Esito Result	The equipment has satisfied the test		
Controllo Smontaggio Eseguito da Dismount test performed by Fincantieri / Cetena	RM SpA	Presso At Cetena Laboratory	CETENA Documento Document
Esito Result	The equipment has satisfied the test		
Parti Sostituite/Modificate Substituted or modified parts			

CETENA S.p.A.
CENTRO PER GLI STUDI DI TECNICA NAVALE

CERTIFICATO DI PROVA D'URTO SHOCK TEST CERTIFICATE	5/12	Eseguito a RIVA TRIGOSO il Test carried out at RIVA TRIGOSO on	26/07/2012
Test richiesto da Test requested by	**Raccorderie Metalliche SpA**	PAGINA/PAGE	2/2
Descrizione dell'esemplare in prova Description of the tested item	**Inoxpress stainless-steel components. Ball Valve DN 80, DN65, DN32; T fitting DN 100-65-100; Elbow fitting DN80; DN50; Reduction DN50-DN32, DN 100-80, DN 100-50; Flange DN 80, DN65, DN32, PN16.**		
Unità / Unit: --			

FOTOGRAFIE O SCHIZZO DELL'ESEMPLARE IN PROVA
TESTING ITEM PICTURES OR DRAWINGS

Visti i risultati delle prove, si certifica che il componente ha superato la prova prevista dalla NAV 30 A001
According to test results, it is certified that the components has satisfied the test in accordance NAV 30 A001

Eventuali Osservazioni
Possible Observations

FIRME
SIGNATURES

CETENA

CIRCOLAZIONE
DISTRIBUTION

NOTES

NOTES

NOTES

RAPIDPRESS

Bends

Spigot Bends

BSP Elbows

BSP Bends

Tees

Couplers

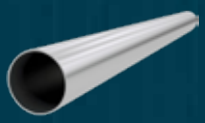
Unions

Tri Clover/ RJT Unions

BSP Adapters

RJT & Tri Clover Adapters

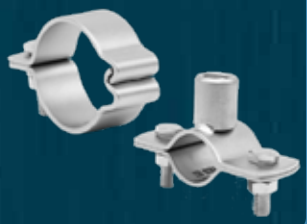
Tube 304 & 316



Valves

Flanges

Clamps



BSP Spigots

BSP Wall Brackets

FlexiFlow Hose

End Caps

Reducers

Camlocks

View our entire range at **www.themetalcompany.co.nz/RapidPress**

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