

 HPi Verification Services	REFERENCE:	PRE - F - 12	ISSUE:	01
	TITLE:	Pressure Equipment Design Appraisal Report (Modules B-B1-G-H1)		

Client & Product Details

Client:	Xi'an J&R Safety Emergency Equipment Co., Ltd.	HPi Project:	P1002-112
Manufacturer's Name:	Xi'an J&R Safety Emergency Equipment Co., Ltd. Shaanxi Province, China	Report No.	DR01
Product Description:	Portable Nano Particles Disposable Fire Extinguisher Types: JE-50&PFE-1, JE-100&PFE-3, JE-150&PFE-2, JE-300&PFE-4	PED Category:	III
		Conformity Assessment Module:	B+C1
Reviewer:	M Convento CEng	Date of review:	26 May and 1 Jun 2015

Findings of the Appraisal

The pressure equipment above listed has been examined to verify the compliance of the relative design ESRs of the Pressure Equipment Directive 97/23/EC using the following code/s and standard/s.

(H) identifies the harmonisation status

- EN 3-7, 3-8 and 3-10 series, BS 6165

The Design appraisal took into consideration the load scenarios highlighted in the ESR checklist and hazard analysis submitted in the PED design file. Client agreed an experimental method with a test regime which cover several aspects specific to the portable fire extinguishers.

See attached report for test results and details. Separate technical files issued for each model.

Assessment Decision

Approved	Name/Title	Signature	Date
	M Convento- Principal Engineer		1 Jun 2015

If approved without comments, a module, B, B1 or H1 certificate may now be issued

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Design Appraisal Record

Drawing Numbers (with issue reference)	JE-50-C-00; JE-100-C-00; JE-150-C-00 JE-300-C-00; All rev.00
Design Pressure	Max working pressure: 12 bar
Design Temperature	-20 to 60 °C
Design Code	Q/JR 007-2013
Additional requirements	Min burst test pressure 120 bar
Software/FEA used by designer for calculations	N/A – Test regime and experimental method were used
Low Temperature	Refer to PMA issued
Internal/External pressure	Assessed – refer to test reports
Load-bearing elements	Not applicable
Wind/snow loading	Not applicable
Vibration	Not applicable
Earthquake	Not applicable
Cyclic Loading (fatigue)	Not applicable – disposable item
PED ESR 7.1.2 allowable stresses verified if harmonized standards not used	Evidence to be attached

Aspects Assessed

Aspect	Result	Aspect	Result
Shell Int Pressure	Assessed	Material (harmonized standard or PMA)	PMA endorsed
Shell Ext Pressure	Not applicable	Operators' qualifications	Not applicable – no welding
Ends (dished or flat)	Not applicable	External Loads	Test regime included impact and mechanical drop

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			tests (BS 6165 Annexes C-D)
Openings	Not applicable	Test Pressure	Burst tests all above 200 bar
Flanges	Not applicable	Suitability of the welding procedures and the fillers used	Not applicable
Supports	Not applicable	Weld Procedures / welders	Not applicable
Lifting lugs	Not applicable	Temp differentials	

List other aspects overleaf, together with the list of branch-pipes / openings, if applicable

Comments

- Client to notify HPi/Ouce when production will start in order to assess the sample size for Mod.C1 compliance to type.
- Drawings to be dated and revision number clearly assigned.
- Test regime (see tests in A Tian's report date 14 Mat 2015) gave satisfactory results and Mod.B type approval will be granted via experimental method.

Authorisation

I certify that I am free of conflicts of interest in relation to this project. I am entirely independent of the client and have no relationship, whether past, current or future, that could give rise to a claim of bias, prejudice or a lack of neutrality or fairness.

**INSPECTOR'S
SIGNATURE**



DATE 1/6/15