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**ZHEJIANG JINRUI HARDWARE RIGGING
CO., LTD**
58 ShengFa Road
Lucheng Light Industrial Zone
WENZHOU
China

**PPE REGULATION 2016/425 – ANNEX V
MODULE B – EU TYPE EXAMINATION
ASSESSMENT REPORT**

Mountaineering Equipment

Report n°	20.1781
Technical referential	EN 12275:2013
Type of device	PPE category III - Connectors
Trade mark	JRSGS
Model	SGM7108TN
Reference	EN12275:2013

Fontaine, the 27/07/2021

Report sent for the attention of Eden GAO to the email address eden.goa@global-otc.com

This report includes 13 pages

The technical assessment manager
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1.Introduction - Description of the service

This assessment report concerns PPE category III – Connectors as defined in EN 12275:2013.

Its purpose is to assess the conformity of the PPE with the PPE REGULATION 2016/425, with a view to be placed on the European market exclusively.

The assessment was conducted in accordance with purchase order signed on 04/11/2020 placed by ZHEJIANG JINRUI HARDWARE RIGGING CO., LTD.

Company: ZHEJIANG JINRUI HARDWARE RIGGING CO., LTD - 58 ShengFa Road - Lucheng Light Industrial Zone - WENZHOU – China

2.Use of the report

This assessment report only concerns the equipment identified in clause 4 and described in clause 7.

Only an integral reproduction of this assessment report is authorized.

The manufacturer, or his representative, commits himself not to use this assessment report for equipment that is not strictly identical to the equipment covered by this re assessment report.

3.Economical operator(s)

ZHEJIANG JINRUI HARDWARE RIGGING CO., LTD - 58 ShengFa Road - Lucheng Light Industrial Zone - WENZHOU – China

4.Identification of the equipment

Trade mark: JRSGS

Model: SGM7108TN

Reference: EN12275:2013

5.Conditions for use of the equipment

This connector is intended to be used, together with other components, as personal protective equipment against falls from a height in the context of mountaineering.

6.Reference specification

The assessment of conformity with Regulation 2016/425 of 9th march 2016 "Personal Protective Equipment" was conducted taking into account:

- The provisions of European standard EN 12275:2013 "Mountaineering Equipment – Connectors".
- UIAA 121:2018

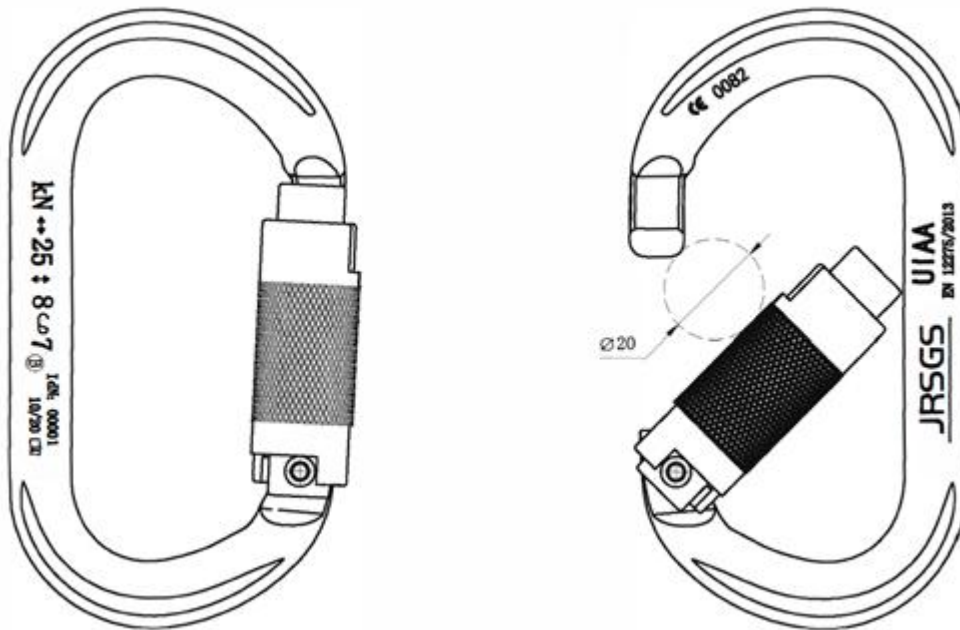
7. Technical Documentation

7.1. Identification

Identification of the assessed Technical Documentation:

1. Authorized representative – Company: Yanmu liu - ZHEJIANG JINRUI HARDWARE RIGGING CO., LTD
2. Commitment signature date: 08/05/2021, last update received on 27/07/2021
3. Technical Documentation reference: Not applicable

7.2. Drawing



7.3.Description

Class B mountaineering connector (basic connector), in 7075 aluminium alloy, with automatic gate locking device by swivel ring. Length 111.2mm, opening 20mm.

7.4.Dimensions

Length	111.2mm
Width	60.5mm
Opening	20mm

7.5.Description of components

Detailed description of components in the Technical Documentation.

7.6.CE Marking

✖ Notified body in charge of assessment control to article 19c) of PPE regulation (module C2 or D):

APAVE SUDEUROPE SAS

✖ CE mark: **CE 0082**

✖ Graphic of letters C and E: **Conform**

✖ Height of mark: **5mm**

✖ Marking clear and permanent: **Conform**

✖ Location of the marking: **On the body of the connector**

7.7.Packaging

Month and year of manufacture is indelibly and unambiguously marked on the packaging

8. Correlation between the articles of PPE Regulation 2016/425 and the reference standard

The following table shows the correlation between the essential health and safety requirements of Regulation 2016/425 of 9th march 2016 "Personal Protective Equipment" and the articles of the European standard EN 12275:2013 "Mountaineering Equipment – Connectors".

PPE Regulation 2016/425 Annex II		Clauses of the standard
1.1.1	Ergonomics	4.2.2
1.2.1.2	Satisfactory surface condition of all PPE parts in contact with the user	4.1.1
1.3.2	Lightness and design strength	4.2.1 and 4.2.3
2.12	PPE bearing identification or recognition marks directly or indirectly related to health and safety	6
1.4	Information supplied by the manufacturer	6 and 7
3.1.2.2	Prevention of falls from a height	4 and 7 Connectors according to this standard are only one part of the safety chain and should be used in conjunction with other compatible equipment

WARNING: Other requirements and other EU Directives may be applicable to the products falling within the scope of this European Standard.

9.Examination report

Article of the standard EN 12275	Content	Conformity*			Comments
		Yes	No	N-A	
Art. 3	Terms and définitions				
	For the purposes of this document, the following terms and definitions apply				
Art.3.1	connector openable device, which enables a mountaineer to link himself directly or indirectly to an anchor or to link parts of the equipment together	✓			
Art.3.2	self-closing connector connector with a self-closing gate	✓			
Art.3.3	basic connector (class B) self-closing connector for use anywhere in a belay system	✓			
Art.3.4	HMS connector (class H) self-closing connector – generally pear shaped – intended to be used primarily for dynamic belaying, for example using an "Italian hitch" (HMS)			✓	
Art.3.5	Klettersteig connector (class K) self-closing connector intended to be used primarily for linking a mountaineer to a Klettersteig anchor (via ferrata) system			✓	
Art.3.6	termination connector (class T) self-closing connector designed to ensure that the loading is in a predetermined direction			✓	
Art.3.7	specific anchor connector (class A) self-closing connector designed only to be linked directly to a specific class of anchor			✓	
Art.3.8	screwed-closure connector (Quicklink; class Q) connector which is closed by a scREW-motion gate, which is a load bearing part of the connector when fully screwed up			✓	
Art.3.9	oval connector (class X) self-closing connector with symmetric shape designed for e.g. aid climbing and pulleys			✓	
Art.3.10	gate of a connector part of the connector which can be moved to open it	✓			
Art.3.11	self-closing gate gate which moves automatically to the closed position when released from any open position, or when unlatched, if there is a gate-open latch	✓			
Art.3.12	gate-locking device mechanism which reduces the possibility of a closed gate being opened inadvertently when unloaded	✓			
Art.3.13	gate-open latch device which holds the gate in the fully-open position and is actuated by a deliberate manual action			✓	

Article of the standard EN 12275	Content	Conformity*			Comments
		Yes	No	N-A	
Art. 4	Requirements				
Art. 4.1	Design				
Art.4.1.1	All parts of a connector that can come into contact with the user's hands and/or combinable components such as ropes, slings, accessory cords and harnesses, shall be free from burrs and sharp edges.	✓			Date of test: 18/11/2020
Art.4.1.2	Connectors of class X shall be roughly symmetrical in outline about the longitudinal centre line. They shall have a minimum radius of curvature of 12 mm at the inner surface of the larger end and shall not have a gate-open latch.			✓	
Art.4.1.3	Connectors of class H shall have a gate-locking device and shall not have a gate-open latch.			✓	
Art.4.1.4	Connectors of class K shall have an automatic gate-locking device and shall not have a gate-open latch.			✓	Op.=20mm
Art.4.1.5	Connectors of class K shall have a gate opening of at least 21 mm.			✓	
Art.4.1.6	Connectors of class K shall be able to accommodate in region A in accordance with Figure 8, a metal rod of 21 mm nominal diameter, without hindering the movement of the gate between the closed and fully open positions.			✓	
Art.4.1.7	Connectors of classes A and T shall be so designed that the line of application of the load to the connector is uniquely defined.			✓	
Art.4.1.8	Connectors of classes B, H, T and X shall have a gate opening of at least 15 mm.	✓			
Art.4.1.9	Connectors of classes B, H, T and X shall be able to accommodate in region A in accordance with Figure 7, two rods of 11 mm nominal diameter, without hindering the movement of the gate between the closed and fully open positions.	✓			
Art.4.1.10	Connectors of class Q shall require at least four complete rotations of the screw-motion gate from the fully screwed up position to disengagement of the threads. There shall be a clearly visible indication if the gate is not in the fully screwed up position, for example by the visibility of threads or visibility of a contrasting coloured region and shall not have a gate-open latch.			✓	

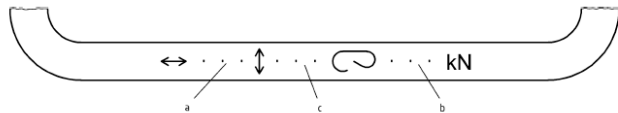

* The measurement uncertainties are not taken into account for the assessment of conformity.

Article of the standard EN 12275	Content	Conformity*			Comments
		Yes	No	N-A	
Art. 4.1	Design (continuation)				Date of tests: 18/11/2020 $\alpha=0^\circ$
Art.4.1.11	Any hinged gate shall only open inwards, towards the body of the connector, but it is permissible for the gate to open at up to 20° from the plane of the connector.	✓			
Art.4.1.12	A gate-open latch shall be designed to latch the gate open, only in its fully open position. The latch shall unlatch the gate automatically, either by attachment of the connector to an anchor, or by loading the connector. The gate open latch can be used for all connectors, except classes H, K, X and Q.			✓	
Art.4.1.13	A manual gate-locking device shall require a deliberate manual action to lock the gate, and shall require at least two different actions to open the gate.			✓	
Art.4.1.14	An automatic gate-locking device shall lock the gate automatically when the gate shuts, and shall require at least two different actions to open the gate.	✓			N _{umber} of action=2
Art.4.1.15	If a tape is fitted to connectors, it shall be in accordance with the stability requirements according to EN 565:2006, 4.1.			✓	
Art. 4.2	Performance				
Art. 4.2.1	Static strength				
Art.4.2.1.1	Major axis with gate closed When tested in accordance with 5.3.2.1.3, connectors, in the major axis with the gate closed, the breaking load shall meet the minimum requirement specified below. Permanent deformation which affects the operation of the connector is acceptable. <ul style="list-style-type: none"> Class B, H, A and T – $F_{break} \geq 20 \text{ kN}$ or F_1 at 25kN Class K and Q – $F_{break} \geq 25 \text{ kN}$ or F_1 Class X – $F_{break} \geq 18 \text{ kN}$ or F_1 	✓		✓ ✓	Date of test: 18/11/2020 $F_{1break}=29.6\text{kN}$
Art.4.2.1.2	Major axis with gate open When tested in accordance with 5.3.2.1.3 in the major axis with the gate open, the breaking load shall meet the minimum requirements specified below. Connectors with automatic gate-locking devices and screwed-closure connectors (class Q) are not required to be tested, except for class K connectors. Permanent deformation which affects the operation of the connector is acceptable. <ul style="list-style-type: none"> Classes B, A and T – $F_{break} \geq 7 \text{ kN}$ Class H – $F_{break} \geq 6 \text{ kN}^{(*)}$ or F_1 Class K – $F_{break} \geq 8 \text{ kN}$ or F_1 Class X – $F_{break} \geq 5 \text{ kN}^{(*)}$ or F_1 <p><small>F_1 : Value declared by the manufacturer</small></p>			✓ ✓ ✓ ✓	

* The measurement uncertainties are not taken into account for the assessment of conformity.

Article of the standard EN 12275	Content	Conformity*			Comments
		Yes	No	N-A	
Art. 4.2.1	Static strength (continuation)				
Art.4.2.1.3	Minor axis When tested in accordance with 5.3.2.1.4, connectors, in the minor axis with the gate closed, shall withstand the loads specified below without breaking. This requirement does not apply to connectors of classes A and T. <ul style="list-style-type: none"> Class B, H, K and X – $F_{break} \geq 7 \text{ kN}$ or $F_1=8 \text{ kN}$ Class Q – $F_{break} \geq 10 \text{ kN}$ or F_1 <p>F_1 : Value declared by the manufacturer</p>	✓		✓	Date of test: 18/11/2020 $F_{1break} = 11.0 \text{ kN}$
Art. 4.2.2	Gate forces				
Art.4.2.2.1	Self-closing gates When tested in accordance with 5.3.2.2, the opening of the gate shall not exceed 3 mm. When released from any open position, or unlatched if there is a gate-open latch, the gate shall return to the fully closed position.			✓	
Art.4.2.2.2	Gate-open latches When tested in accordance with 5.3.2.2.3.1, the minimum force required to latch the gate open shall not be less than 10 N. When tested in accordance with 5.3.2.2.3.2, the force required to be applied to the connector to unlatch the gate shall not be greater than 15 N.			✓	
Art.4.2.2.3	Gate performance under load For connectors of classes B, T and X, if not fitted with a device intended to lock the gate closed when loaded, when tested in accordance with 5.3.2.2.4, it shall be possible to open the gate fully by hand, and, when released, the gate shall return to the fully closed position, from any open position.			✓	
Art. 4.2.3	Gate resistance (for gate locking device)				
Art.4.2.3.1	Gate face When tested in accordance with 5.3.2.2.5, the gate-locking feature shall withstand a force of $(1 \pm 0,1) \text{ kN}$ during $(60 \pm 1) \text{ s}$ without separating the gate from the body of the connector by more than 1mm and shall still function.	✓			Date of tests : 18/11/2020 Separating= 0mm
Art.4.2.3.2	Gate side When tested in accordance with 5.3.2.2.6, the gate-locking feature shall withstand a force of $(1,5 \pm 0,15) \text{ kN}$ during $(60 \pm 1) \text{ s}$ without separating the gate from the body of the connector by more than 1mm and shall still function.	✓			Separating= 0mm

* The measurement uncertainties are not taken into account for the assessment of conformity.

Article of the standard EN 12275	Content	Conformity			Comments
		Yes	No	N-A	
Art. 6	Marking Connectors shall be marked clearly, indelibly and durably with at least the following information: a name of the manufacturer or his authorized representative; b connector class letter in accordance with Clause 3 surrounded by a circle, for class H, class K and class X connectors; classes B and T connectors shall not be marked with B or T surrounded by a circle unless they are fitted with a gate-locking device; c minimum strength values in kN to the nearest whole number below the value guaranteed by the manufacturer, for the following modes of loading (where there is a test requirement): <ul style="list-style-type: none"> Major axis gate-closed; Major axis gate-open; Minor axis. The markings shall take the form in accordance with Figure 14 together with the marking "kN" either at the beginning or at the end. The marked strength shall be a whole number of kN. <div data-bbox="395 1111 1015 1223">  </div> <div data-bbox="323 1238 588 1321"> <p>Key a major axis strength – gate closed b major axis strength – gate open c minor axis strength</p> </div>	✓			
	d year of manufacturing when the connector has permanently attached load bearing textile parts; e graphical symbol, which advises the user to read the information given by the manufacturer (see Figure 15). <div data-bbox="628 1507 743 1597">  </div> <p>Figure 15 — Graphical symbol (according to ISO 7000, Symbol No. 1641)</p>	✓			
Regulation	Regulation <ul style="list-style-type: none"> × CE Marking (CE + Notified body in charge of module C2 or D) × The CE marking shall be affixed visibly, legibly and indelibly to the PPE. × For PPE subject to ageing : the month and year of manufacture and/or, if possible, the month and year of obsolescence must be indelibly and unambiguously marked on each item of PPE placed on the market and on its packaging × Name and address of the manufacturer × Type, batch or serial number or other means of identification 	✓	✓	✓	
		✓			On the packaging

Article of the standard EN 12275	Content	Conformity			Comments
		Yes	No	N-A	
Art. 7	Concerning the instruction for use: Only the English version has been checked. It is the responsibility of the manufacturer to supply the instruction for use in the official languages of the country of destination				
	Information to be supplied The information shall contain at least the following: a name and address of the manufacturer or his authorized representative b reference number of this European Standard: EN 12275; c the meaning of any markings on the product; d the use of the product; e if the connector cannot be opened when under load; f how to choose other components for use in the system; g how to maintain and service the product; h the lifespan of the product or how to assess it; i the effects of chemical reagents and temperature on the product; j the effects of storage and ageing.	✓			
Regulation	Presence of : × Name and address of the manufacturer × Name, address and identification number of the notified body or bodies involved in the conformity assessment of the PPE (module B and module C2 or D) × EU declaration of conformity or the internet address where the EU declaration of conformity can be accessed × The risk against which the PPE is designed to protect ; × The reference to this Regulation × The references to the relevant harmonised standard(s) used, including the date of the standard(s), or references to the other technical specifications used	✓			

10. Conclusion

The PPE category III – Connectors identified in paragraph 4 meet the Essential Health and Safety Requirements of PPE Regulation 2016/425 of 9th march 2016.

The assessment of conformity takes into account the compliance of the PPE with the provisions of European standard EN 12275:2013, and with the conformity of manufacturer's technical documentation.

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