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## ***INFORME TECNICO***

### ***TECHNICAL SURVEY REPORT***

**Ref: M-6022**

**Su referencia: FF JOB 210689**

**SY “VELOCITA “**

**Asunto / Subject: SURVEY OF PARTS OF THE RIG**

*Extendido por / Issued by:*

*D. Ignacio de Llano Monelos*

*Capitán de la Marina Mercante, Colegiado COMME nr. 5114*

*Comisario de Averías Marítimo / Marine Surveyor, UNESPA-APCAS.*

*Nivel II – Ultrasonidos, Líquidos penetrantes - Cert ENAC*

*Miembro del IIMS, APCA and AEND*

*Atendiendo al requerimiento / Upon request of:*

***FUTURE FIBRES***

*Lugar y fechas / Place and date:*

On the 21<sup>st</sup> April, in our office

**Nota final:** Este Informe, por su carácter exclusivamente técnico, emitido con mi mayor leal saber y entender, se extiende sin prejuzgar la cuestión de derecho y/o responsabilidad de cualquiera de las partes interesadas en el mismo.

**Final note:** This report, due to its exclusively technical character, and expressed to the best of my knowledge, is issued without prejudice.

En Palma, a 26 de abril de 2022

El Inspector, The Surveyor

Ignacio de Llano

**Independent surveyors established in 1992. Performing NDT in the marine industry, hulls, masts and rigging in metal and fibres, as well as wind-power generators, aerospace and hypercars, new construction or damage in service since 1997**

### **I.- Alcance de la inspección / Aim of the inspection**

The inspection was carried out in order to check the serviceable condition of connecting parts of the standing rigging. The parts are built in stainless steel.

### **II.- Procedimientos de inspección / Survey procedure**

A preliminary visual inspection was carried out, followed by the survey by means of non-destructive testing methods.

#### **II.1- PROCEDIMIENTO DE INSPECCION “END”-**

##### **“NDT” SURVEY PROCEDURE – “UT”**

- Visual inspection. Microscopy
- Ultrasound test, UT: The test is performed for searching internal and surface defects and damage. The test was carried out by means of a portable instrument MENTOR UT, by pulse-echo method, contact technique by means of compression and shear waves. Straight and angle beam single crystal probes of frequency of 5MHz with delay soles were used for conventional A-scan, as well as an angle beam phased array 16 elements probe was used for B-scan
- Penetrant Liquid Test, PT: The aim of the penetrant liquids testing, dye test, is the searching of defects and damages open to the surface. The test is carried out by means of a set of ARDROX red penetrating liquids. Day light and 20 minutes for penetrating time and 10 minutes for developer are the test condition.

### **III.- De la Inspección / The inspection**

The parts of the rig were fully checked by means of visual and ultrasound testing. The dye test was performed to threads.

The parts were cleaned previous to the inspection, in order to remove grease and dirtiness.

The parts are in a good serviceable condition, no damage or noticeable wear was detected.

The following photos show the condition of the parts.



Noses of D1 and CP-D2 without damage or wear



CR-D3 tangs and throughmast bar. In a good serviceable condition



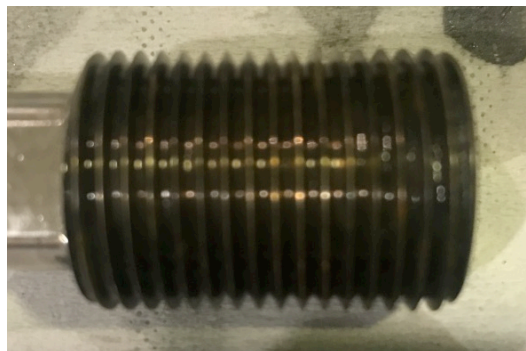
V1, D1 and CR-D2 adjusters. No damage was detected on the parts



Adjusters studs without damage or wear on threads



Eye studs, V1 and D1. No damage detected on threads and eyes



**TABLA de piezas inspeccionadas y resultados****TABLE of inspected parts and results****Resultados de la inspección - Result of the inspection:**

**S** - en uso - in serviceable condition

**P** - pulir - to be polished

**PC** - pulir e inspeccionar - polishing and re-inspection

**RH** - renovar cabeza - re-heading

**RRH** - recomendado renovar cabeza - recommended to re-head

**RR** - recomendado renovar - recommended to renew

**R** - renovar - renew

**RP** - reparar - to repair

**NA** - no aceptable, rechazada, dañada - not acceptable, rejected, damaged

**NI** - no inspeccionada - not inspected

**No reference - Sin referencia** -- no se usa en esta jarcia, no necesita inspección, no disponible - no used in the rig, no necessary to inspect, non available

**MA** - Asesoramiento del fabricante recomendado -- Manufacturer advisement recommended

**RIG PARTS**

	<b>Part</b>		<b>1<sup>st</sup> insp</b>	<b>2<sup>nd</sup> insp</b>	<b>Notes</b>
1	<b>CR - V1</b>	V1-S eye stud	S		
2		V1-S threaded sleeve	S		
3		V1-P eye stud	S		
4		V1-P threaded sleeve	S		
7	<b>D 1</b>	D1-S eye stud	S		
8		D1-S threaded sleeve	S		
9		D1-P eye stud	S		
10		D1-P threaded sleeve	S		
11	<b>ADJUSTERS</b>	V1 S adjuster	S		
12		V1 S stud	S		
13		V1 P adjuster	S		
14		V1 P stud	S		
15		D1 S adjuster	S		
16		D1 S stud	S		
17		D1 P adjuster	S		
18		D1 P stud	S		
19		CR-D2 S adjuster	S		
20		CR-D2 S stud	S		
21		CR-D2 P adjuster	S		
22		CR-D2 P stud	S		
23	<b>NOSES</b>	D1 U S nose	S		
24		D1 U P nose	S		
25		CR-D3 U S nose	S		
26		CR-D3 U P nose	S		
27	<b>CR-D3</b>	Tang S	S		
28		Throughmast bar	S		
29		Tang P	S		

El inspector firmante está certificado conforme a las normas UNE-EN 473 y ISO 9712, para metales y sector aeroespacial, cubriendo con ello metales, aleaciones, soldadura, fibra de vidrio, fibra de carbono y composites. Métodos de ultrasonidos y líquidos penetrante.

The undersigning surveyor is Certified according to norms UNE-EN 473 and ISO 9712 for metals and aerospace sectors, therefore covering metals, alloys, welding, composites, GRP and carbon fibre. Ultrasound and Penetrating Liquids testing

**Nota:** El presente informe se refiere solamente a los defectos y daños detectables por los métodos de inspección utilizados, no incluyendo el deterioro o degradación interna del material ni la disminución de sus características.

**Disclaimer:** The present report is referred to the defects that are detectable by means of the inspection methods used for the survey. It does not include the ascertaining of the reach of the internal wear and tear on the material inspected, as well as the decrease of its characteristics.