



AMERICA'S CUP CLASS

CONFIDENTIAL INTERPRETATION No 3

April 29, 2005

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In response to the following:

We request a confidential interpretation on the following questions in relation to ACC Rules 36.14 and 36.15 .

1. Is there any restriction in using manually generated electricity to remotely perform mechanical work on the **Running rigging, standing rigging or appendages** using the following devices?:
 - a. Linear Actuator
 - b. Electric motor
 - c. Solenoids
 - d. Other electro-mechanical devices.

2. Is there any restriction in using manually generated electricity to remotely perform mechanical work in the control of a hydraulic system that adjusts the **Running rigging, standing rigging or appendages** using the following devices?
 - a. Linear Actuator
 - b. Electric motor
 - c. Solenoids
 - d. Other electro-mechanical devices.

This would replace existing manually operated hydraulic valves with manually operated electrical switches.

3. Is it permissible to control mechanical systems (i.e. Hydraulics) in question 2 with Programmable Logic Controllers (PLCs) and/or amplifiers which are powered by manually generated electricity?

In this case the PLC has manually operated control switches but requires the manually operated generator to be running before control voltages are transmitted to the electro-mechanical hydraulic valves.

4. Is it permissible to run PLCs from the yachts batteries provided that the electrical current that performs the mechanical work in the control system is manually generated?

5. If the answer to Q3 above is yes, is it allowable for those Logic Controllers and Amplifiers to accept low power signals from:
 - a. Sensors (e.g. String Pots, Hydraulic Pressure etc) which are powered from the yachts batteries,
 - b. The yachts instrument systems or navigation computers?

INTERPRETATION

1. Rule 36.14 states:

“**Running rigging, standing rigging and appendages** shall only be adjusted manually using mechanical systems as necessary...”

An electrical system is not a mechanical system therefore the use of an electrical system to facilitate any mechanical work which results in the adjustment of the **running rigging, standing rigging or appendages** is not permitted regardless of how the electrical power for the system is generated. As such none of the devices listed are permitted in relation to the adjustment of the **running rigging, standing rigging or appendages**.

2. For the purposes of this interpretation a hydraulic system that incorporates electrical control is not considered to be a purely mechanical system and is therefore not permitted under Rule 36.14. If any of the devices listed introduce an electrical component into a system that performs mechanical work which results in adjustment of the **running rigging, standing rigging or appendages** then they are not permitted..

3. No.

4. Rule 36.15 states:

“For the avoidance of doubt, remote actuation of valves or other control systems by any source of stored energy is not allowed”.

Programmable Logic Controllers are considered to form part of a control system and as such they are not permitted to be powered by any source of stored energy. For the purposes of this interpretation a battery is regarded as a source of stored energy.

5. Not applicable. END

This interpretation is made by the Measurement Committee in accordance with Rule 3.2 of Version 5.0 of the America's Cup Class Rule.

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