SGS

Project: **FIRE TEST FOR SOFT-SEATED BALL VALVE**

Certificate No.: **216/09 - 9587**

Client: ***J.C FABRICA DE VALVULAS, S.A.***

Office: **Sant Joan Despí (BCN)**

Client's Order No.:: **---**

Date: **09.03.09**

Order Status: **Complete**

Inspection dates
First: **17.09.08**

Final: **17.03.09**

This certificate is issued to

Messrs. **J.C FABRICA DE VALVULAS, S.A.**, upon their request that the undersigned Suveryor to this Society did attend their premises at their works in Sant Boi de Llobregat - Barcelona (Spain) for the purpose of witnessing the FIRE TEST in accordance with the requirements specified in ISO 10497:2004, on the following type of valve:

A manually operate soft seated ball valve of 4" bore 4", symetric Valve as per fig. 2515 I.I.T, 150#
Body and Connector material A351 CF8M
Seats: SEE DRAWING 6613
Ball material: SEE DRAWING 6613
Stem: SEE DRAWING 6613

Marks:

- BODY : Col. 707015
- CONNECTOR : Col. 707024

The test conducted on the valve previously subject to hydraulic pressure was as follows:

The valve in the closed position, filled with water under test pressure, was put in a box and exposed to flames with an environmental temperature in the region 750° C for a period of 30 minutes and established the leakage trough the seat and external to atmosphere during this period. The temperature was checked and recorded every two minutes, while leakages were determined using containers collecting the water leaked during burn period. Afterwards cool-down to 100° C. The valve seat and external hydrostatically tested to the appropiate test pressure and leakages recorded accordingly. Subsequently manually opened up under test pressure differential and finally the valve was fully hydrotested and leakages recorded.

All the following values were determined and recorded together with temperatures, times and pressures as shown on manufacturers Fire Safe Test Report nº C216/09

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1. Through-valve leakage during burn period - SATISFACTORY.
2. External leakage during burn and cool-down period - SATISFACTORY.
3. Through-valve leakage during operational test - SATISFACTORY.
4. External leakage during operational test - SATISFACTORY.
5. Operatibility to full open position and external leakage - SATISFACTORY.

The valve was subject to a visual examination with satisfactory results and subsequently dismantled in order to verify that valves components comply with the drawing and parts list supplied by the manufacturer, while seat rings were found completely destroyed.

The manufacturers Fire Safe Test Report nº C216/09 and drawing 6613 herewith attached were satisfactory checked and signed.

The above is considered in accordance with the mentioned specifications requirements, therefore the subject valve has satisfactory passed the prescribed fire test and can be also qualified as follows.

DN	CLASS RATING	PN RATING
50 and below to 200 and larger	150#, 300#	10, 16, 25, 40

Note: According to point 7.2.2 of ISO 10497: 2004 : " If a range of valves is covered by testing of ferritic test valves then type-testing coverage may be extended to cover austenitic or duplex materials by carrying out a further test on a mid-range size of valve of the same design in that material "

SGS Tecnos, S.A.
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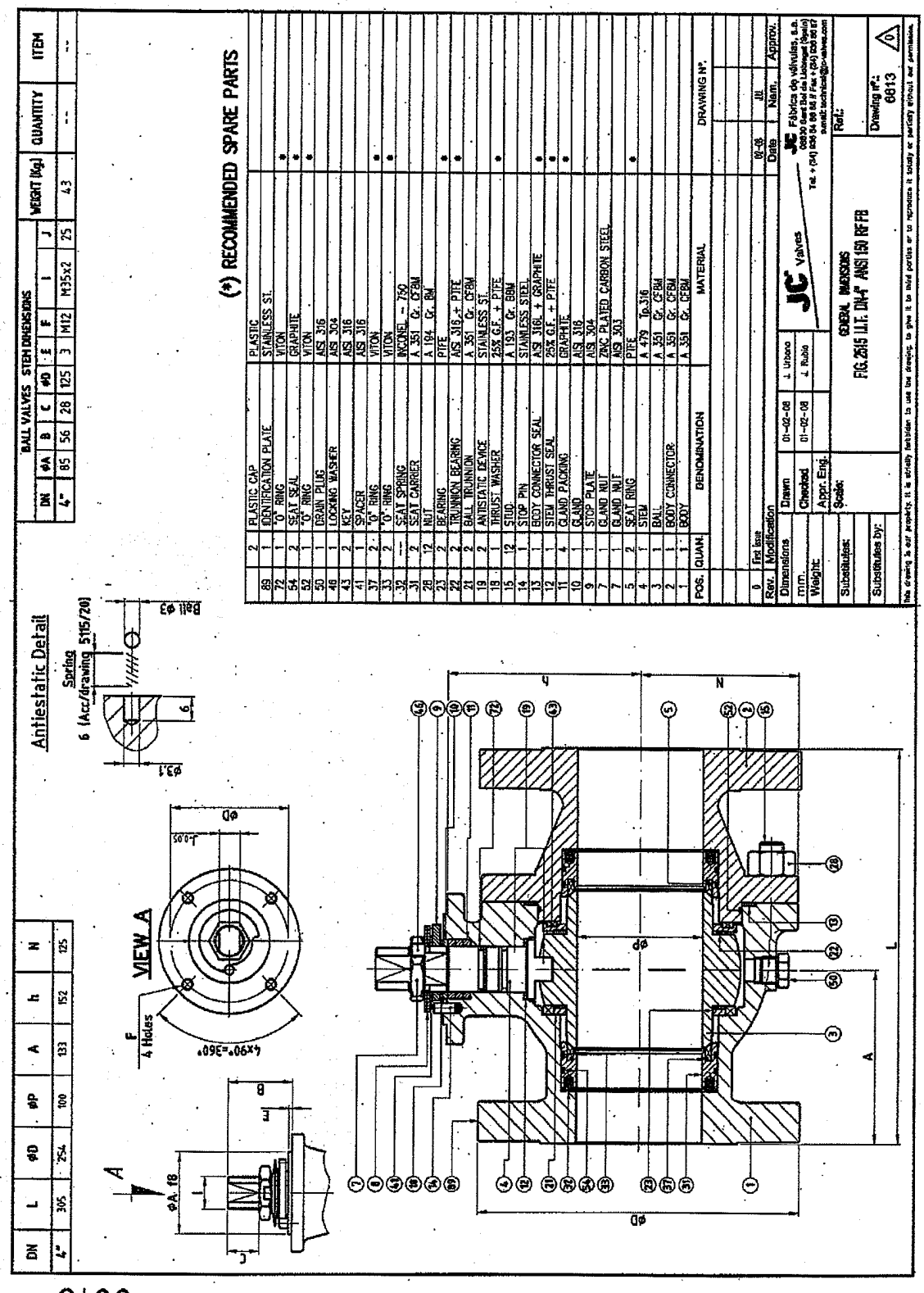
Surveyor Iñigo Labrador

DOCUMENTS ATTACHED:
Sheets reviewed and stamped
Accordingly.

SGS

Certificate No.: **216/09 - 9587**
Office: **Sant Joan Despí (BCN)**
Date: **17.03.09**
Sheet 3 of 3



6613