

Accumulated Testing Facilities

INDUSTRY
Subsea

LOCATION
UK

PROJECT
Design and installation of accumulated testing facilities.

The challenge

As part of LB Bentley's commitment to ongoing product development and with the increasing demands from the industry, a decision was made to enhance our in-house testing regime.

In order to achieve the most stringent and accurate testing of our products and, in particular, our hydraulic actuators we are required to replicate operational field conditions. This was done in close discussion with one of our key global customers to ensure that we could fully understand and document the main considerations, such as:

- The subsea operating sequence.
- How the fluid is introduced into the high pressure side.
- The speed of application.
- What happens with the low pressure fluid.
- The effect of the hyperbaric pressure on the displaced fluid.

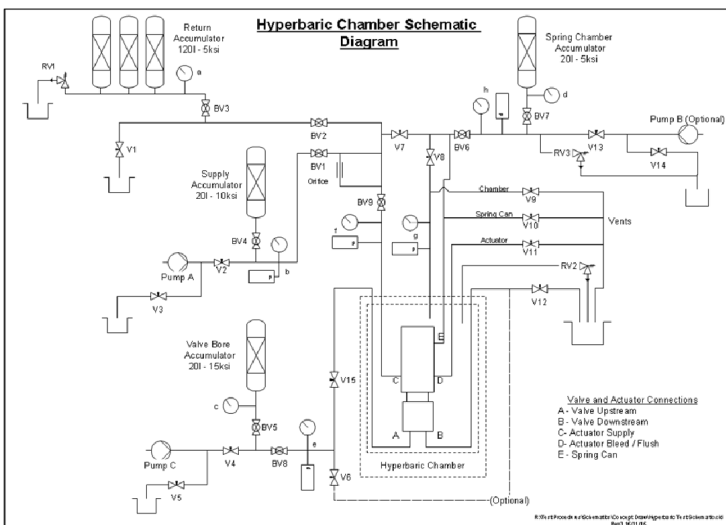
All of these considerations were taken on board to determine the overall affect and influence on an actuators operation. These effects were then modelled on a P&ID that replicates and simulates the pressures available from an infinite pressure reservoir such as the ocean. A key factor was ensuring that the accumulators were sized correctly so that the system could operate continuously for the optimum number of cycles.

The solution

Taking all of the necessary factors into consideration our experts developed the necessary safe operating procedures, ensuring that the subsea pressure effects were correctly balanced and reflected on the P&ID layouts. On agreeing the defined and refined procedures the equipment was sourced and purchased.

The existing Hyperbaric test cell was reconfigured and updated so that it was ready to accept the new equipment, and the subsequent installation and commissioning of the equipment went smoothly.

P&ID for Accumulated Testing Facilities



The outcome

This new process of testing is now fully operational and our new range of OPTItork™ actuators were the first to benefit from this style of 'field' testing philosophy. They have been launched safe in the knowledge that they are the most severely tested product that LB Bentley have ever brought to market.

Enhanced facilities to support customer requirements