

# DIVEX HSE ALERT



HSE Alert No. HSE002-2007

## INCORRECT FITTING OF VALVE IN GAS LINES

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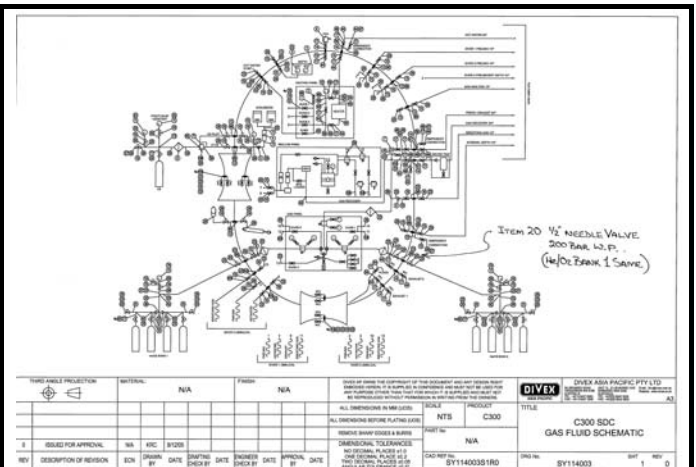
<b>DATE</b>	12/04/07	<b>COUNTRY:</b>	AUSTRALIA	<b>LOCATION:</b>	DIVEX ASIA PACIFIC, PERTH
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### DESCRIPTION

A potential Divex Asia Pacific (DAP) incident was avoided where inspections picked up the instalment of a 1,000psi ball valve where the drawing stipulated a 3,000psi needle valve. The valve had previously passed final inspection, system testing and an independent 3<sup>rd</sup> Party audit of the system. The photos below highlight what was found as a result of the inspection:



High Pressure lines (3,000psi) and Low Pressure lines (1,000psi) are located in the same area.



Project specific schematic drawing indicates what valves need to be installed and the position.

### INVESTIGATION FINDINGS

- The lines involved were "Onboard Gas Supply Line (25% O<sub>2</sub> and 75% Helium) - internal;
- It is acceptable engineering practice to have ball valves in these types of lines;
- Technician involved was inexperienced in Divex Asia Pacific systems and made a human error;
- There was a lack of Supervision of a Technician that had recently joined Divex Asia Pacific;
- The incorrectly fitted internal valves were not picked up through the Divex Asia Pacific final inspection;
- The incorrectly fitted internal valves were not picked up through the independent 3<sup>rd</sup> Party System Audit;
- If the same incorrect valves had also been fitted externally the internal incorrectly fitted valves would probably have been picked by both Divex Final Inspection and 3<sup>rd</sup> Party Audit.

### LESSONS LEARNED

- Technicians must ensure they follow the details outlined in schematics and material take off (MTO);
- AITPs (Assembly, Inspection & Test Plans) need to be compiled for use before commencing job;
- AITPs need to be signed when assembly, inspection and test activities are completed;
- New employees may be experienced but they are only learning to use Divex systems to begin with;
- New employees require extra supervision until they are experienced in Divex systems.

## **CORRECTIVE ACTION**

- The incident was reported as a near miss within the Divex HSE Management System;
- The Technician and Project Manager were involved in a full incident investigation;
- All new Divex Asia Pacific Technicians need to be trained in Divex Production Procedures GEN-WP-001, 002, 003 and 009;
- A Divex gap analysis must be conducted of new employee competence levels upon employment and the level of training and supervision needs to be determined and provided;
- A Personal Responsibility For QHSE interview was held with DAP (Divex Asia Pacific) employee;
- A Personal Responsibility For QHSE interview was held with the DAP Project Manager;
- DAP have appointment of a Production Manager independent of DAP Project Management;
- Process training for all DAP Technicians to ensure compliance with Divex systems;
- All gas lines need to be identified either by numbering or colour coding and have suitable valve identification through use of identification plaques preferable indicate pressure ratings;
- A copy of the HSE Alert to be posted in all Divex Workshops;
- A copy of the HSE Alert will be sent to the Geo Subsea Project Management.

## **RECOMMENDATIONS**

- Divex Production Managers shall discuss this incident at Production / Operations Meetings;
- Technicians must pay attention to valves being fitted when signing off the AITP;
- Divex personnel need to also make sure that pressure related items such as valves, hoses and hose fixings are checked to ensure they are the correct rating and are fit for purpose.

**THIS HSE ALERT IS NOT TO BE COMMUNICATED OUTWITH DIVEX AND IS FOR THE GEO SUBSEA C300 PROJECT TEAM DISTRIBUTION ONLY.**

**NAME:** Kevin Smith

**JOB TITLE:** General Manager - QHSE

**DATE:** 12/04/07

**for and on behalf of Divex Ltd.**