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# INTEGRITY ALERT

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Integrity Alert No : 001-2008  
Release Date : August 21, 2008  
Issued By : Ron Chapman

Subject : **DEFECTIVE BLOCK VALVE CASTINGS**

The Federal Ministry for the Economy and Labour has been informed by the market supervision authority in Finland (TUKES) of valves encountered in Finland which could incur an operational risk. These valves relate to the manufacturers:

**HATTERSLEY HEATON** (England)

**FIRSA** (Italy)

**NEWAY** (China)

Valves of concern are in the diameter range from 2" to 24", manufactured in accordance with the ASME/API Codes ASTM A-217 WC9 and ASME SA-217 C5. The valve bodies are made of heat-treated cast steel and are intended for use with gaseous hydrocarbons in high temperature service.

According to the information from TUKES, in 2007, cracks were found on such a valve in a Finnish refinery. Further investigations revealed impermissible casting defects, including heat cracks, in valves from the manufacturers referred to above, as well as insufficient heat treatment and resultant stress cracks and impermissible material properties. A total of 900 valves were replaced at the refinery due to these defects.

Information provided to date does not identify defective castings as limited to a specific valve type or casting heat number. All stock and operating valves, in applicable pipe classes, are to be inspected immediately. Defective valves are to be removed from service and replaced. Please record defective valve make, model and heat number and forward to Asset Integrity c/o Ron Chapman complete with description and photos of noted defects

#### Attachments

- TÜV Austria alert circular
- Photos – typical identified valve defects
- SA217 Material Standard

5067//HÖL/JIN  
27.6.2008

Distribution: All staff GB/DG  
cc: TPA, TÜ-W, WS

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CIRCULAR

DG No. 013/2008

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**Warning regarding dangerous valves**

**BMWA letter 93.571/0004-I/13/2008**

Dear Sirs,

Please find appended the letter in reference from the BMWA, which makes reference to the market supervisory measures relating to valves from the manufacturers:

- **Hattersley Heaton** (England)
- **Firsa** (Italy)
- **Neway** (China)

from 2" to 24" for gaseous hydrocarbons.

The BMWA is urgently recommending the most rapid possible inspection and reporting on such valves as have been installed. Please report to me for collective forwarding to the BMWA.

Please take action forthwith.

Vienna, 27.6.2008

G. HÖLTMANN

**BMWA**  
Federal Ministry  
for the Economy and Labour

TÜV Austria Services GmbH  
Krugerstraße 16  
1015 Vienna

Name/Extension:  
Dipl.-Ing. Pauker/8217  
Transaction Ref.:  
BMWA-93.571/0004-I/13/2008

Please reply, quoting the Transaction Reference, to the E-mail address: [post@bmwa.gv.at](mailto:post@bmwa.gv.at)

**Warning regarding dangerous valves in accordance with the Pressurised Equipment Order, Federal Law Gazette II, No. 426/1999**

Dear Sirs,

The Federal Ministry for the Economy and Labour is taking the liberty, by way of the information enclosed with this letter, to warn pressurised equipment operators with regard to dangerous valves which are being brought into commercial circulation in Europe. They are requested, in the event of such valves being encountered in the course of their activities (conformity assessment of modules or performance of first operational tests, operational test, or recurrent investigations) to proceed in the sense and meaning of the information letter and to inform the Federal Ministry for the Economy and Labour of the results of their investigations.

**Letter to operators  
including picture documentation**

Best regards  
Vienna, 26.06.2008  
On behalf of the Federal Minister:  
Dipl.-Ing. Helmut Bayer

Prepared electronically

**BMWA**  
Federal Ministry  
for the Economy and Labour

Name/Extension:  
Dipl.-Ing. Pauker/8217  
Transaction Ref.:  
BMWA-93.571/0004-I/13/2008

Please reply, quoting the Transaction Reference, to the E-mail address: [post@bmwa.gv.at](mailto:post@bmwa.gv.at)

**Market supervision in accordance with the Pressurised Equipment Directive 97/23/EC;  
Warning with regard to potentially dangerous valves with hydrocarbons as content medium**

Dear Sirs,

The Federal Ministry for the Economy and Labour has been informed by the market supervision authority in Finland (TUKES) of valves encountered in Finland which could incur an operational risk. These valves relate to the manufacturers:

**HATTERSLEY HEATON** (England)

**FIRSA** (Italy)

**NEWAY** (China)

in the diameter range from 2" to 24", manufactured in accordance with the ASME/API Code and taking consideration of the Pressurised Equipment Directive. The valve housing is made of heat-treated cast steel in accordance with ASTM A-217 WC9 and ASME SA-217 C5 respectively. The valves are intended for use with gaseous hydrocarbons.



According to the information from TUKES, in 2007 cracks were found on such a valve in a Finnish refinery. Further investigations revealed impermissible casting defects, including heat cracks, in valves from the manufacturers referred to above, as well as insufficient heat treatment and resultant stress cracks and impermissible material properties. A total of 900 valves were replaced at the refinery due to these defects.

It is unclear who the manufacturers of the castings and valves are, since the information from TUKES also includes the withdrawal of a certificate from the agency specified, Bureau Veritas, of May 2008, for the manufacturing module D from the manufacturer **Kunshan Valve Co. Ltd.** (China). Bureau Veritas (France and Italy branches) had certified the modules to be used in accordance with the Pressurised Equipment Directive for all the manufacturers named.

The picture documentation appended to this letter shows the valve bodies, as well as the defects typically encountered on these valves. More detailed information regarding the defects, the causes, and the investigations can be requested from TUKES, the data being in the NANDO databank.

In the event of such valves being installed in your systems, it is most urgently recommended that investigations be conducted as rapidly as possible in order to take any defective valves out of operation and replace them. The same applies by analogy to future use or approval of such valves. Information as to whether your valves from the manufacturers mentioned could be affected by such defects should be requested from the organization referred to, Bureau Veritas France (Identification No. 0062) or Italy (Identification No. 1370); for more information see the NANDO databank.

The Federal Ministry for the Economy and Labour asks to be informed if such valves are installed and are being used in Austrian systems, as well as being provided with the results of any investigations.

**Picture documentation**

*sent to:*

*OMV, RAG, Borealis, Voest*

Best regards

Vienna, 26.06.2008

On behalf of the Federal Minister:

Dipl.-Ing. Helmut Bayer

Prepared electronically



