

APPROVAL CERTIFICATE

The Working Group Production, Storage and Transport Safety (GEST) of Euro Chlor, after examination of the documents listed in Appendix 1, declared that the valves manufactured by

Phönix Armaturen-Werke - Bregel GmbH - Am Stadtbruch 6, 34471 Volkmarsen Postfach 1140 34467 Volkmarsen (Germany)

As described hereafter:

- Are in accordance with the specification GEST 06/318, 2nd edition - June 2012
- And are approved for use with liquid and dry gaseous chlorine.

This Approval Certificate is given for the bellow sealed globe valves model(s) (Phönix references):

350 remotely operated shut-off valves types EC.16 and EC.17

- Manufactured with dimension DN25 mm to DN150 mm/1 inch to 6 inches,
- According to PN40 and ANSI 300 Lbs,
- And in accordance with the documents listed in Appendix 1, an original of which being filed by Euro Chlor.

Euro Chlor keeps the right to cancel this approval certificate in case of infringement of the prescription of the GEST specification 06/318.

Phönix Armaturen-Werke

Euro Chlor

Working Group Production,
Storage and Transport
Safety (GEST)



Mr Matthias Schubert
Managing Director

Mr Alistair Steel
Executive Director

Mr Ton Manders
GEST Chairman

Location:
Volkmarsen/Germany

Location: Brussels/Belgium

Location: Amersfoort/The
Netherlands

Date : 22/02/2013

Date : 23/01/2013

Date : 28/01/2013

LIST OF DOCUMENTS

1. Phönix submission file for bellows remotely operable shut-off bellow sealed valves model 350EC 16 and 350EC 17 with GEST 06/318 (letter of July 2005 with drawings).
2. Existing approval certificate 97/04 of the valves 350EC 4 and 350EC 5, with similar mechanical construction as the 350 EC 16 and 350 EC17.
3. Mail “AW: 06-069E - Approval models 350EC.16 and 350EC.17” of May 26, 2006 (slight changes between models EC4-5 and EC16-17)
4. Comparison valves 350 EC16-17 with GEST 06/318
5. E-mail “AW:07-742E -Valves EC 16 and EC 17”, with answer to questions raised by the Euro Chlor Equipment working group members:
 - a) Installations reference list with contact persons
 - b) Type 350EC 16-17 sectional drawing
 - c) Differences list type 350EC 4-5, EC 8-9 and EC 16-17
 - d) Comments on pages 2, 3 and 4 of GEST 98/247
 - e) Comments on page 7 of GEST 98/247
 - f) Comments on page 13 of GEST 98/247
 - g) Comments on pages 10, and 11 of GEST 98/247
 - h) Comments on pages 17, 18, 19, 20, 21, 22, 23 and 24 of GEST 98/247
6. Mails from Evonik, Arkema, Hydro Polymers Akzo Nobel, Solvay LII and Bayer confirming positive field experience with these valve types
7. TÜV conformity certificate November 28, 2012
8. Mail Phönix (G. Wodara) of December 27, 2012 : “AW: your e-mail dated 13.01.12-12039E - New guideline on chlorine valves”