

Inspection Certificate

Date issue : June 01 2016

Certificate No. : TNK-9160-16-ICL-0001
Equipment : Valve
Manufacturer : ICL Co., Ltd.
The Date of Inspection : May 18. 2016 ~ May 27. 2016
Location of inspection : #55, Gomo-ro 364beon-gil, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, Korea

This is to certify, at the request of ICL Co., Ltd. that the valve below has passed the fugitive emission test successfully according to Class BH of ISO 15848-1:2015 for a total of 1500 cycles.

Item	Gate Valve, BB, RF, OS&Y, H/O
Valve size	3"
Pressure rating	Class 1500
Stem size	Ø 31.8mm
Body / bonnet material	ASTM A217 WC6
Seal material	Graphite
Valve assembly drawing no.	GA1500-3-LFE


The tested valve covers performance class (para.6.6) of ISO 15848-1.

; ISO FE BH - CO2 - SSA 1 - t(RT, 400°C) - CL1500 - ISO 15848-1

Extension of qualification (in particular) to the beolw untested valves in accordance with paragraph 8 of ISO 15848-1.

- Others stem sizes qualified: 15.9mm - 63.6mm
- Others pressurer ranges qualified: Class 1500 and lower.

This certificate must be read in conjunction with test report no. ICL16-FE-01.


Won - Tae, Kim
PED Authorized Inspector
IBR Authorized Inspector
TÜV CPR Auditor
TÜV Material Manufacture Auditor
TÜV Material Expert / Inspection Representative
TÜV Welding Expert
TÜV Certifier of MD / LVD / EMCD



Inspection Certificate

Date issue : June 01 2016

Certificate No. : TNK-9160-16-ICL-0002
Equipment : Valve
Manufacturer : ICL Co., Ltd.
The Date of Inspection : May 18. 2016 ~ May 27. 2016
Location of inspection : #55, Gomo-ro 364beon-gil, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, Korea

This is to certify, at the request of ICL Co., Ltd. that the valve below has passed the fugitive emission test successfully according to Class BH of ISO 15848-1:2015 for a total of 1500 cycles.

Item	Gate Valve, BB, RF, OS&Y, G/O
Valve size	6"
Pressure rating	Class 1500
Stem size	Ø 46.0mm
Body / bonnet material	ASTM A217 WC6
Seal material	Graphite
Valve assembly drawing no.	GA1500-6-LFE


The tested valve covers performance class (para.6.6) of ISO 15848-1.

; ISO FE BH - CO2 - SSA 1 - t(RT, 400°C) - CL1500 - ISO 15848-1

Extension of qualification (in particular) to the beolw untested valves in accordance with paragraph 8 of ISO 15848-1.

- Others stem sizes qualified: 23.0mm – 92.0mm
- Others pressure ranges qualified: Class 1500 and lower.

This certificate must be read in conjunction with test report no. ICL16-FE-02.


Won - Tae, Kim
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IBR Authorized Inspector
TÜV CPR Auditor
TÜV Material Manufacture Auditor
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Inspection Certificate

Date issue : Aug. 19, 2016

Certificate No. : TNK-9160-16-ICL-0003
Equipment : Valve
Manufacturer : ICL Co., Ltd.
The Date of Inspection : July 12, 2016 ~ July 14, 2016
Location of inspection : #55, Gomo-ro 364beon-gil, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, Korea

This is to certify, at the request of ICL Co., Ltd. that the valve below has passed the fugitive emission test successfully according to Class AH of ISO 15848-1:2015 for a total of 1500 cycles.

Item	Ball Valve, FB, TR, RF, 3-P, G/O
Valve size	2"
Pressure rating	Class 1500
Stem size	Ø 32.0mm
Body / bonnet material	ASTM A105 / ASTM A216 WCB
Seal material	O-ring-FMK, Graphite
Valve assembly drawing no.	BA1500-2-LFE


The tested valve covers performance class (para.6.6) of ISO 15848-1.

; ISO FE AH - CO₂ - t(RT, 200°C) - CL1500 - ISO 15848-1

Extension of qualification (in particular) to the beolw untested valves in accordance with paragraph 8 of ISO 15848-1.

- Others stem sizes qualified: 16.0mm – 64.0mm
- Others pressurer ranges qualified: Class 1500 and lower.

This certificate must be read in conjunction with test report no. ICL16-FE-03.


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Inspection Certificate

Date issue : Aug. 19, 2016

Certificate No. : TNK-9160-16-ICL-0004
Equipment : Valve
Manufacturer : ICL Co., Ltd.
The Date of Inspection : July 15, 2016 ~ July 20, 2016
Location of inspection : #55, Gomo-ro 364beon-gil, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, Korea

This is to certify, at the request of ICL Co., Ltd. that the valve below has passed the fugitive emission test successfully according to Class AH of ISO 15848-1:2015 for a total of 1500 cycles.

Item	Ball Valve, FB, TR, RF, 3-P, G/O
Valve size	8"
Pressure rating	Class 1500
Stem size	Ø 80.0mm
Body / bonnet material	ASTM A105 / ASTM A216 WCB
Seal material	O-ring-FMK, Graphite
Valve assembly drawing no.	BA1500-8-LFE

The tested valve covers performance class (para.6.6) of ISO 15848-1.

; ISO FE AH - CO2 - t(RT, 200°C) - CL1500 - ISO 15848-1

Extension of qualification (in particular) to the beolw untested valves in accordance with paragraph 8 of ISO 15848-1.

- Others stem sizes qualified: 40.0mm – 160.0mm
- Others pressurer ranges qualified: Class 1500 and lower.

This certificate must be read in conjunction with test report no. ICL16-FE-04.


Won - Tae, Kim
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TÜV Material Expert / Inspection Representative
TÜV Welding Expert
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