

## Certificate of Completion

Date issue : 18. 10. 2019

**Certificate No.** : TNK-KP-19-492-03  
**Equipment** : H-P BUTTERFLY VALVE PHB-4IN (WAFER TYPE CLASS150)  
**Manufacturer** : P&K ENG CO., LTD.  
**Address of Manufacturer** : 56-45, Buil-ro, 815beon-gil, Guro-gu, Seoul, 08262, Korea

This is to certify, at the request of P&K ENG CO., LTD. that the below WAFER TYPE BUTTERFLY VALVE successfully passed the fire test according to API STANDARD 607, June 2016.

<b>Test Specimen</b>	<b>H-P BUTTERFLY VALVE PHB-4IN (WAFER TYPE CLASS150)</b>
<b>Specimen No.</b>	<b>TCHPV-TS-19-222</b>
<b>Valve size / class</b>	<b>4"(DN100) / CLASS150</b>
<b>Stem Material</b>	<b>17-4PH</b>
<b>Body / Disc material</b>	<b>WCB/ CF8M</b>
<b>Seat material</b>	<b>RTFE/316SS</b>
<b>Valve drawing no.</b>	<b>PHB-4IN-B (FS), Rev.0</b>
<b>End Connection</b>	<b>CLASS150 4inch Wafer Type</b>

### Location and date of fire test

- Location of fire test: Laboratory of Technical Center for High-Performance Valve at DONGA-A University.  
( SM226, 37 Nakdong-Daero 550beon-gil, Saha-gu, Busan-city, Korea )
- Date of fire test: 04.09.2019

This certificate must be read in conjunction with test report no. TCHPV-19-216.

**Won-Tae Kim**

TÜV PED Authorized Inspector / Certifier  
 TÜV Material Expert / Inspection Representative  
 TÜV Welding Expert  
 TÜV CPR / ISO 9001 Auditor  
 TÜV MD Engineer

