

## Certificate of Completion

Date issue : 01. 10. 2018

**Certificate No.** : TNK-KP-18-478-01  
**Equipment** : WAFER TYPE BUTTERFLY VALVE (PHB-50A)  
**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 (Seventh Edition, June 2016).

<b>Test sample name / Model no</b>	<b>WAFER TYPE BUTTERFLY VALVE / PHB-50A</b>
<b>Valve size / class</b>	<b>2"(50A) / Class 150(10K)</b>
<b>Stem Material</b>	<b>A564-630 (17-4PH)</b>
<b>Body / Disc material</b>	<b>CF8</b>
<b>Metal / Soft seat material</b>	<b>316 / RTFE</b>
<b>Valve assembly drawing no.</b>	<b>PHB-50A-B(FS), Rev.0</b>
<b>Max. Working Pressure</b>	<b>19 bar</b>
<b>Working Temperature</b>	<b>-19 °C to +38°C</b>

### Location and date of fire test

- Location of fire test: 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: 20.08.2018

This certificate must be read in conjunction with test report no. TCHPV-18-09-201.



### Won-Tae Kim

TÜV Authorized Inspector (PED)  
TÜV Material Expert / Inspection Representative  
TÜV Welding Expert  
TÜV CPR Auditor  
TÜV Certifier of MD / LVD / EMCD