



## TYPE APPROVAL CERTIFICATE

**Certificate No.** : NYK05774-PE006                      **Initial Approval** : 6th May, 2013  
**Product** : Mechanical Joints  
: Victaulic Company  
4901 Kesslersville Road, Easton, PA 18040, U.S.A.

**Product Description** : Mechanical Joints (Slip-on joints - Grooved type)  
Model : Victaulic Style W77 AGS flexible coupling

" See Appendix 1 "

**Approval Condition** : " See Appendix 1 & 2 "

**THIS IS TO CERTIFY** that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows and entered in the "List of Approved Manufacturers and Type Approved Equipment".

Pt 5, Ch 6, Sec 1 of the Rules for the Classification of Steel Ships.

This Certificate is valid until 5th May, 2023

Issued at Busan, Korea on 14th June, 2018

**KOREAN REGISTER OF SHIPPING**  
  
General Manager of  
Marine & Ocean Equipment Team

- Note : 1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.  
2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.  
3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.  
4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.*

## Appendix 1

# Product Description and/or Approval Condition

Certificate No : NYK05774-PE006

Date of Issue :14 June, 2018

## A. Product Description

### 1. Product Specification

- Model : Victaulic Style W77 AGS flexible coupling
- Sizes : DN350(14") ~ DN600(24")
- Max. Working Press. : 20 bar
- Temperature Range : -34 °C ~ 110 °C

### 2. Approved Drawings and documents

- S-240-W77-000
- H-240-W77-001
- G-140-W07-004
- C-140-W77-003

### 3. Test Reports, etc.

- Test reports carried out on 11 March, 2011 for the following test items : tightness, vacuum, burst, fire endurance, flexural bend

## B. Approval Condition

### 1. Application & Limitation

- 1) The mechanical joints can be used for the following pipeline lines in easily visible and accessible positions
  - Flammable fluids(Flash point  $\leq 60$  °C)
    - : Cargo oil lines, Crude oil washing lines and Vent lines
  - Inert gas
    - : Water seal effluent lines, Scrubber effluent lines and Distributions lines
    - : Main lines outside machinery space of category A and accommodation spaces
  - Flammable fluids(Flash point  $> 60$  °C)
    - : Cargo oil lines
    - : Fuel oil lines, Lubricating oil lines, Hydraulic oil lines and Thermal oil lines outside machinery space of category A and accommodation spaces
  - Sea water
    - : Bilge lines, Fire main and water spray lines, Foam system lines, Sprinkler system lines, Ballast system lines, Cooling water system lines, Tank cleaning services lines and Non-essential system lines
  - Fresh water
    - : Cooling water system lines, Condensate return lines and Non-essential systems lines
  - Sanitary/Drains/Scuppers
    - : Sanitary drain lines
    - : Deck drain lines(internal) above free board deck
  - Sounding/Vent
    - : Water tanks/Dry spaces lines
    - : Oil tanks lines(Flash point  $> 60$  °C) outside machinery space of category A and accommodation spaces
  - Miscellaneous
    - : Service air lines(non-essential) and Brine lines

### 2) Limitation

- Where the application of mechanical joints results in reduction in pipe wall thickness, this is to be taken into account in determining the minimum wall thickness of the pipe to withstand the design pressure.
- Material of mechanical joints is to be compatible with the piping material and internal and external media.
- These mechanical joints, which in the event of damage could cause fire or flooding, are not to be used in piping sections directly connected to the sea openings or tanks containing flammable fluids.
- These mechanical joints are not to be used in pipelines in cargo holds, tanks, and other spaces which are not easily accessible. Application of these inside tanks may be permitted only for the same media that is in the tanks.

< To be continued >

## Appendix 2

# Product Description and/or Approval Condition

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### 2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual Product Certification is required where the mechanical joints are intended to use for Class I or II piping system.

### 3. Marking

For traceability to this type approval, the couplings are at least to be marked with

- Manufacturer's name of trade mark
- Type designation / size

### 4. Others

\* Place of Production

- 1) The Quality Castings Company  
1200 North Main Street, Orrville, OH 44667 USA
- 2) Victaulic de Mexico, S. de R.L de C.V  
Avenida Aeroespacial 12601, Parque Industrial Chihuahua Sur, Chihuahua, CH 31385 Mexico
- 3) Dalian Refrigeration Co., Ltd  
No. 106 Liaohe East Road, Jinzhou District, Dalian, Liaoning, 116630 China

< End of Certificate >

