

Formosa – Development of FM underground firefighting pipe in Taiwan

Case: Development of FM underground firefighting pipe in Taiwan
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PE100+ member: Formosa Plastics Corporation
Author: Technical department, Polyolefin Division
Period: November/2018 to December/2018
Country/region: Mailiao Industrial Complex, Taiwan
Network owner: Formosa Plastics Group
Engineer/Installer: Semiplastics
Pipe producer: Nan Ya Plastics Corporation

Conventional cast iron pipelines will corrode and leak after some period. HDPE pipes are resistant to chemical corrosion and considered an excellent substitute for cast iron used as underground firefighting pipes. In Taiwan, replacement of cast iron underground firefighting pipes is gradually implemented. Therefore, Formosa Plastics Corporation and Nan Ya Plastics Corporation established a collaborative project to develop the application of underground firefighting pipes, which are compulsory to hold FM Approval. So far, Nan Ya uses FPC's PE100 and provided two products for firefighting systems available from: FM 1613 approval for 150 psi (SDR11), and for 200 psi (SDR9). This pressure designation means that these firefighting pipes can handle maximum operating pressure of 3.2 times of the specified pressure in case of a water hammer without any failure.

The pressure resistance ability of the used material was modified in order to meet a higher standard for 230 psi (SDR9).

The project was realized with PE 100 on pipes from 110 mm to 630 mm.

Positive aspect of PE 100 was the increasing durability of the pipelines.



Connection of fire fighting pipes