

October 13, 2021

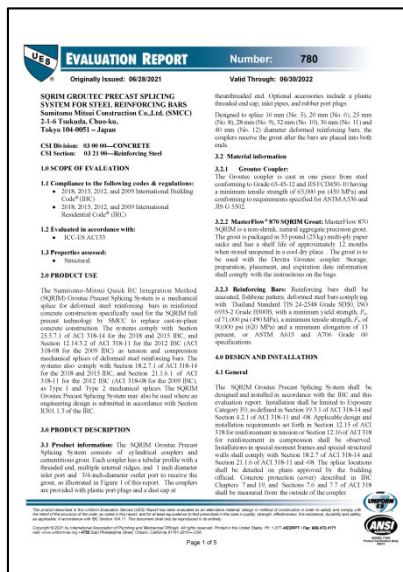
## Acquisition of International Standard Evaluation Certificate of Mechanical Rebar Joint System for PC Connections

— Towards the Simplified Application of SQRIM Method in Overseas —

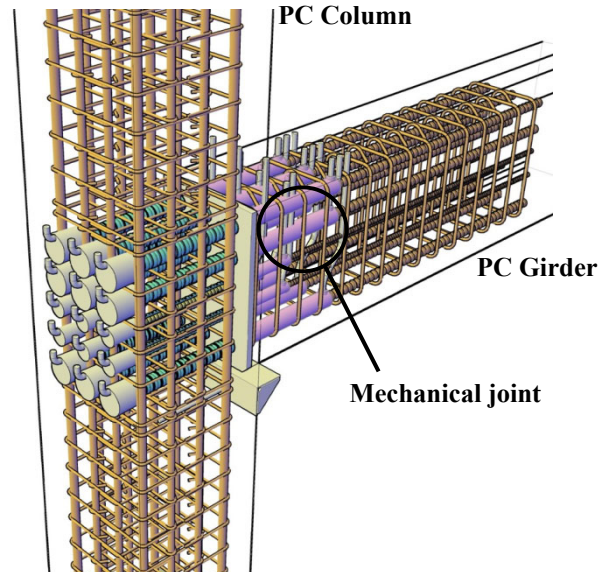
Sumitomo Mitsui Construction Co., Ltd., - SMCC (2-1-6, Tsukuda, Chuo-ku, Tokyo, 104-0051, President: Kondo Shigetoshi) in collaboration with DEXTRA Manufacturing Co., Ltd. (Bangkok, Thailand Chairman & CEO Jean-Marie Pithon) has acquired an international standard evaluation certificate<sup>(1)</sup> (ICC-ES AC 133 Type 2) of the mechanical rebar joint system (grout-filled mechanical joint) used for precast (PC) connections for the SQRIM method<sup>(2)</sup>.

In this regard, the need for designers to guarantee the performance of mechanical rebar joints<sup>(3)</sup> is eliminated when used overseas for SQRIM requiring seismic design, this makes its application easier.

- (1) Certified by IAPMO UES/IAPMO Uniform Evaluation Service (American evaluation service) in accordance with ICC-ES AC 133
- (2) Full precast method (SMCC patented technology) that integrates the beam & column without cast-in-place concrete at the connections.
- (3) Mechanical splicing method of reinforcements other than pressure and ordinary welding.



Evaluation Certificate (excerpt<sup>(4)</sup>)  
(4) Evaluation Certificate full version



Mechanical Rebar Joint System (Illustration)

### ■ Mechanical Rebar Joint System Overview

This system uses materials from international companies with global supply networks, the SQRIM method can be applied in overseas regions that require seismic design.

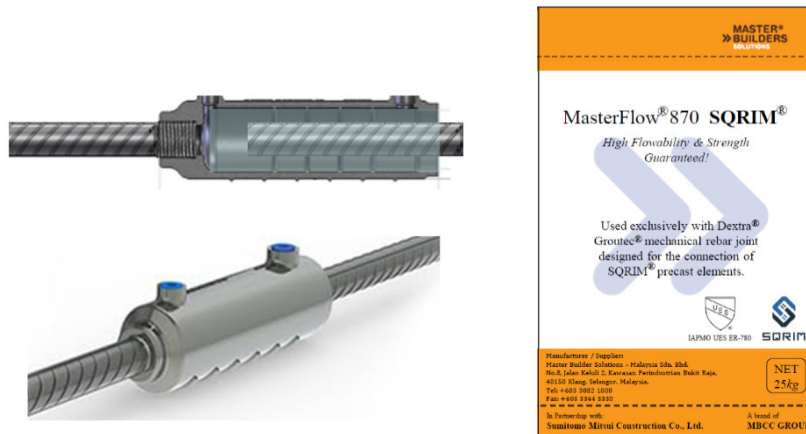
The materials used are as follows.

#### Mechanical Joints (Groutec)

Made by DEXTRA; manufactures and sells mechanical joints around the world. (Main Office: Thailand)

#### Grout (MasterFlow 870 SQRIM)

Made by Master Builders Solutions Malaysia; the largest construction chemical company that sells and produces non-shrink high-strength grout for mechanical joints (Main Office: Germany)



Groutec (Left) and MasterFlow 870 SQRIM (Right)

### ■ Background of Acquisition of Evaluation Certification

SMCC has accumulated a track record of the construction of high-quality structural building frames such as high-rise residential buildings with a short construction period using the SQRIM method in Japan.

Utilizing these technologies and achievements, SMCC started expansion in overseas markets. In Japan, the performance of PC member joints (mechanical joints) is guaranteed by “The Building Center of Japan”. However, the performance is guaranteed by the designers in overseas each application. This has been a major issue in applying the SQRIM method overseas.

Therefore, SMCC obtained an international standard evaluation certificate for the mechanical rebar joint bar system in collaboration with Dextra and the most suitable grout was chosen for the joint system.



First Overseas Application of SQRIM in a Pipe Rack Structure (Malaysia, 2017)

### ■ Future Deployment

SMCC will continue to cooperate with international companies and will actively work on the overseas expansion of a safe and high-quality SQRIM method.

### ■ Contact

For inquiries regarding this matter, please contact the following.

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