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**Test method for tensile properties
of fiber reinforced polymer (FRP)
sheets for reinforcement of
concrete**

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Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Land, Infrastructure and Transport through deliberations at the Japanese Industrial Standards Committee according to the proposal of establishing a Japanese Industrial Standard from Japan Concrete Institute (JCI)/Federation of Construction Material Industries, Japan (FECMI)/Japanese Standards Association (JSA), with a draft of Industrial Standard based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

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In the event of any doubts arising as to the contents,
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Contents

	Page
1 Scope	1
2 Normative reference	1
3 Definitions	1
4 Test specimens	1
4.1 Types of test specimen	1
4.2 Preparation of test specimen	2
4.3 Number of test specimens	3
5 Test machine and strain gauge	4
5.1 Test machine	4
5.2 Strain gauge	4
6 Test method	4
6.1 Dimension measurement of test specimen	4
6.2 Setting of strain gauge	4
6.3 Setting of test specimen	4
6.4 Loading velocity	5
6.5 Temperature of testing room	5
6.6 Range of test	5
7 Test results	5
7.1 Treatment of results	5
7.2 Load—strain curve	5
7.3 Tensile strength	5
7.4 Modulus of longitudinal elasticity	6
7.5 Ultimate strain	6
8 Report	6

Test method for tensile properties of fiber reinforced polymer (FRP) sheets for reinforcement of concrete

1 Scope This Japanese Industrial Standard specifies test methods for tensile properties of fibre reinforced polymer sheets for reinforcement of impregnated and cured concrete using impregnated adhesive resin (hereafter referred to as “continuous fibre sheet”).

2 Normative reference The following standard contains provisions which, through reference in this Standard, constitute provisions of this Standard. The most recent edition of the standard (including amendments) indicated below shall be applied.

JIS B 7721 *Verification and calibration of the force measuring system of the tension/compression testing machines*

3 Definitions For the purpose of this Standard, the following definitions apply.

- a) **continuous fibre sheets for reinforcement of concrete** thousands to tens of thousands of fibres of a few μm to ten and a few μm of diameter are bundled, and they are made to sheet type or textile type, laying on a plane in one direction or in two directions
- b) **impregnated adhesive resin** resin which bring out the function of a complex whose continuous fibre sheet is impregnated, cured using impregnated adhesive resin, and is combined throughout its fibre, and has the action of an adhesive continuous fibre sheet bonding to the surface of concrete
- c) **fixing part** the end part of test specimen where tab is bonded
- d) **tab** plate of fibre reinforced plastic, aluminium and so on to be bonded to the end part of test specimen to transfer the load
- e) **plate** complex of continuous fibre sheet before the test specimen is cut out
- f) **maximum tensile load** the maximum load obtained by the testing machine until the test specimen is broken
- g) **ultimate strain** the strain corresponding to the maximum tensile load
- h) **fibre bundle** the bundling of some fibres

4 Test specimens

4.1 Types of test specimen Test specimens shall be of the following two types.

- a) **Type A test specimen** Type A test specimen shall be the test specimen produced by the method specified in 4.2.1, and shape and dimension of the test specimen shall be in accordance with figure 1.