

The title starting from the third line  
Arial or Helvetica in all capital letters,  
14pt, centered, within 130 letters

① The top margins are 25mm

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Write "- Technical Paper -" or  
"- Technical Report -" in Italic typeface

- Technical Paper

## TEMPLATE OF MICROSOFT WORD FORMAT FOR JCI ANNUAL CONVENTION PROCEEDINGS

②

The left and right  
margins are 22 mm

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Arial or Helvetica in all capital  
letters 10pt, centered

### ABSTRACT

Centered and the last name  
should be typed in all capitals

Braided aramid fiber bar is used in pretensioned bond test. Local bond stress were obtained from the strain distribution along the embedded bar. The embedded length was made large enough not to cause strain change at center of specimen. The local bond stress-slip relationship of braided aramid fiber bar varies with test method. In the pretensioned bond test, a pull bond test with and a pullout test with short embedment. The effect of concrete strength on the local bond stress-slip relationship differs with test method.

Arial or Helvetica

⑧ Not more than 6 lines

Keywords: aramid fiber, bond stress, pretensioned bond test, concrete strength, bond test

Not more than 2 lines,  
below the abstract

Arial or Helvetica

### 1. INTRODUCTION

Continuous fiber reinforcing materials such as braided aramid fiber bar and carbon fiber strand are going to be applied to concrete structures [1]. A design concept of concrete structures reinforced or prestressed with continuous fiber reinforcing materials has already been reported by JSCE committee [2]. However, bond characteristics between the reinforcing materials and concrete have not been clarified yet.

In the bond characteristics, a local bond stress-slip relationship is the most basic law for representing action between .....

Indent 5  
spaces at the  
start of new  
paragraph

References are indicated  
consecutive numbers in brackets

Table 1 Characteristics of reinforcements

Type	Elastic	Tensile	
	Modulus (kN/mm <sup>2</sup> )	strength (N/mm <sup>2</sup> )	
Braided	59	1320	Strap
Braided	59	1320	Strap
Deformed	178	684	Tendon
Deformed	200	994	Stirrup

Numbered, Arial or  
Helvetica, with captions  
typed above the table

### 2.2 Loading Method

The specimens are subjected to monotonic pull out load using.....

Leave one line space above  
the second level headings

## 2. TEST PROGRAMS

### 2.1 Materials

#### (1) Reinforcing material

Braided aramid fiber bar and carbon fiber strand of nominal diameter are used. The characteristics of reinforcements are shown in Table 1.....

#### (2) Concrete

The specified concrete strength is 30MPa using maximum 20mm of coarse aggregate size and compressive strength and splitting tensile strength at 28 days are 33.2MPa and 2.56MPa, respectively.

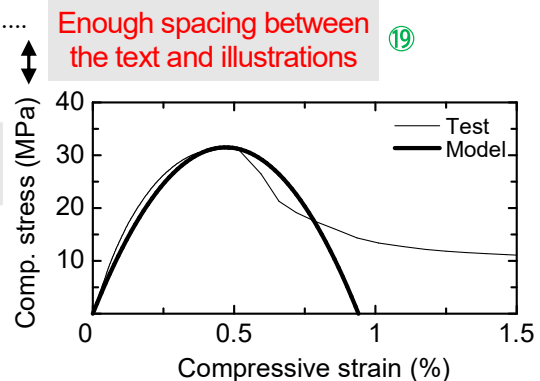


Fig.1 Stress - strain curves

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typed below the figure and photo

① The bottom margins are 20mm, nothing in the header or footer

Indent 5 spaces

The sectional area is given as follows:

②①  $\longleftrightarrow A = V / l_0$  ②① (1)

where,

$A$  : sectional area  
 $V$  : volume  
 $l_0$  : length

Numbered in the right margin

The volume is obtained by measurements of test piece .....  
.....

①②

Leave one line space above and below the major headings

### 3. CONCLUSIONS

- (1) Local bond stress-slip relationship of braided

aramid fiber is .....

- (2) The specified concrete strength is 30MPa using maximum 20mm of coarse aggregate size and compressive strength and splitting tensile strength.

### ACKNOWLEDGEMENT

The authors acknowledge the supports of ①②  
Nanboku University. ....  
.....

Not numbered, must be centered

### REFERENCES

- [1] Davis, J. M., "Simplified Diaphragm Analysis," Journal of Structural Div., ASCE, Vol. 103, Nov. 1977, pp. 2098-2109.
- [2] Shanley, F. R., "Basic Structures," John Willey & Sons Inc., 1947, pp. 291-314.

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Allowed to use abbreviations of academic societies