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HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW*

KARYA ILMIAH: JURNAL ILMIAH

Judul Karya Ilmiah (Paper)	: **Experimental data from strengthening bamboo reinforcement using adhesives and hose-clamps**	
Jumlah Penulis	: 1 Orang (1. Muhtar, 2. ...., 3. ...., 4. ....)	
Status Pengusul	: Penulis pertama / ~~penulis ke....~~ / penulis korespondensi**	
Identitians Jurnal/Prosiding	: a. Nama Jurnal/ Prosiding	: Journal Data in Brief
	b. ISSN/ISBN	: 2352-3409
	c. Tahun Terbit, (tempat pelaksanaan jika prosiding)	: 2019
	d. Penerbit/Organiser	: Elsevier B.V
	e. Alamat repository PT/ Web	: http://repository.unmuhjember.ac.id/4025/
	f. Terindek di (jika ada)	: Scopus

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(Beri √ pada kategori yang tepat) :

- [√] Jurnal Internasonal Bereputasi
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Kelengkapan unsur dan kualitas penerbit (30%)	12					12
Total 100%	40					40
Kontribusi Pengusul (Penulis Pertama/ Anggota Utama)						100 %x40 = 40
Komentar Peer Review	1. Tentang Kelengkapan dan kesesuain unsur : lengkap dan sesuai unsur Pedoman pd jurnal Data in Brief 2. Tentang Ruang Lingkup dan kedalaman pembahasan : Ruang lingkup sesuai, pembahasan cukup mendalam tentang metode menyiapkan data dg FEM dan bahasa program Fortran 3. Kecukupan, Kemutakhiran data serta metodelogi : Referensi relevan, namun kurang 4. Kelengkapan unsur kualitas penerbit : jurnal dengan penerbit terkenal ELSEVIER 5. Indikasi Plagiasi: tidak ada, total similarity 12 % 6. Kesesuian bidang ilmu : Linier dan sesuai bidang ilmu penulis					

Malang , April 2020
Reviewer 1

(**Prof. Dr. Ir. Sri Murni Dewi, MS.**)
NPK/NIP. 195112111981032001
Unit kerja: Teknik Sipil UB Malang
Jafung : Guru Besar
Bidang Ilmu : Teknik Sipil

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HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW*

KARYA ILMIAH: JURNAL ILMIAH

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Status Pengusul	: Penulis pertama / ~~penulis ke….~~ / penulis korespondensi**	
Identitians Jurnal/Prosiding	: a. Nama Jurnal/ Prosiding	: Journal Data in Brief
	b. ISSN/ISBN	: 2352-3409
	c. Tahun Terbit, (tempat pelaksanaan jika prosiding)	: 2019
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Total 100%	40					39
Kontribusi Pengusul (Penulis Pertama/ Anggota Utama)						100% × 39 = 39
Komentar Peer Review	1. Tentang Kelengkapan dan kesesuain unsur : lengkap sesuai Pedoman Jurnal Data in Brief 2. Tentang Ruang Lingkup dan kedalaman pembahasan : Lingkup sesuai bidang, analisa cukup mendalam tentang TEM dan Bahasa pemograman, ada penjelasan bagaimana mendapatkan data. 3. Kecukupan, Kemutakhiran data serta metodelogi : Referensi Relevan dan kurang 4. Kelengkapan unsur kualitas penerbit : Jurnal dengan penerbit terkenal ELSEVIER 5. Indikasi Plagiasi: tidak ada, total similarity 12% 6. Kesesuaian bidang ilmu : Sangat sesuai dengan bidang Ilmu penulis					

Malang , April 2020
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(Prof. Dr. Ir. Rudy Soenoko, M.Eng.Sc.)
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Unit kerja: Teknik Mesin UB Malang
Jafung : Guru Besar
Bidang Ilmu : Teknik Mesin

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All Authors: Muhtar - Muhtar, M.T.
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All Authors: Muhtar - Muhtar, M.T.
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Data of bamboo reinforced concrete elements were provided from the pull-out test and the beam flexural test, the data can be used to develop research on bamboo reinforced concrete structures. I recommend its publication after the following comments and questions are revised.
Suggestions for modification are as follows:

1. The significance of the specimen number should be given in Figure 2 and Figure 3, such as "BRC, PC, SRC".
2. Figure 13 and Figure 14 both show step 8, please correct them.
3. The meaning of Specimens/Code in Table 1 should be added.
4. The details of the specimens in the pull-out test and the flexural test should be provided, such as dimensions and loading details of the specimens.

Managing editor: Please refer to the link to the raw data in the "specification table/data accessibility" i.e. "Data with the article, raw data can be found table 1, http://bit.ly/2PvYuXS, and http://bit.ly/2NxiYgq."

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Journal Title: Data in Brief
Corresponding Author: Dr. Muhtar - Muhtar
All Authors: Muhtar - Muhtar, M.T.
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Comments from the handling Editor and Reviewers (if applicable):

Authors addressed the reviewer's suggestions.

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First author: Dr. Muhtar
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Article revised: 6-NOV-2019
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Journal Title: Data in Brief
Corresponding Author: Dr. Muhtar - Muhtar
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Reviewers (if applicable):

Reviewer #1: Data of bamboo reinforced concrete elements were provided from the pull-out test and the beam flexural test, the data can be used to develop research on bamboo reinforced concrete structures. I recommend its publication after the following comments and questions are revised.
Suggestions for modification are as follows:

1. The significance of the specimen number should be given in Figure 2 and Figure 3, such as "BRC, PC, SRC".
2. Figure 13 and Figure 14 both show step 8, please correct them.
3. The meaning of Specimens/Code in Table 1 should be added.
4. The details of the specimens in the pull-out test and the flexural test should be provided, such as dimensions and loading details of the specimens.

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Answers to comment of Reviewer

1. Provision of specimen numbers in Fig. 2 and Fig. 3 has been done. This is written in the paper in Fig. 2 and Fig. 3.
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   Step 8: Pull-out test setting. Specimen details and pull-out test settings are shown in Fig. 13 and Fig. 14.

   Step 9: The flexural test setting. Details, geometry, and flexural test settings are shown in Fig. 15 and Fig. 16.

   This is written in the paper in step 8 and step 9.
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Answers to comment of Managing Editor:

Data accessibility has been changed from:

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Data accessibility : Data with the article, raw data can be found in Table 1, http://bit.ly/2PvYuXS, and http://bit.ly/2NxiYgq.

*Detailed Response to Reviewers

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Article Title

Experimental data from strengthening bamboo reinforcement using adhesives and hose-clamps

Authors

Muhtar

Affiliations

Department of Civil Engineering, Faculty of Engineering, University of Muhammadiyah Jember, Jember, 68121, Indonesia

Corresponding author(s)

Muhtar (muhtar@unmuhjember.ac.id)

Abstract

The bamboo treatment process starts with cutting, soaking in water, draining in free air, reinforcing in the fireplace, first-stage adhesive coating, hose-clamp installation, second-stage adhesive coating, and sand resurfacing. Data was taken from experimental testing of bamboo materials and bond strength tests of bamboo reinforcement in the laboratory of the Faculty of Engineering, University of Brawijaya Malang. The aim of treating and strengthening bamboo reinforcement is to overcome low-load capacity and prevent collapse due to slippage in bamboo reinforced concrete elements. Adhesive coating is employed to increase durability and prevent water absorption, while installing hose-clamps increases bamboo reinforcement slip resistance. The process outlined here represents the way to approach bamboo reinforcement, and laboratory data is processed into graphic images and tables of bond strength of bamboo reinforcement providing the basis for further research. This article comprises a standard operating procedure for treatment of bamboo reinforcement, graphic images, documentation photos, and data tables. The data is related to "Enhancing bamboo reinforcement using a hose-clamp to increase bond-stress and slip resistance" [1].

Keywords

bond strength, bamboo reinforcement, strengthening, bamboo

Specifications Table

Subject	Engineering

Specific subject area	Civil and Structural Engineering
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Data format	Raw and analyzed
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Description of data collection	Bond strength data was obtained from testing bamboo reinforcement specimens after different treatments. Data from each specimen is processed and analyzed into table data, image data, and photo data which are described as single data. This single data is collected together, processed, compared, re-analyzed into table data, image data, and photo data, which is then called intact data
Data source location	University of Muhammadiyah Jember, Jember, 68121, Indonesia, and University of Brawijaya, Malang 65145, Indonesia
Data accessibility	Data with the article, raw data can be found in Table 1, http://bit.ly/2PvYuXS, and http://bit.ly/2NxiYgq
Related research article	Enhancing bamboo reinforcement using a hose-clamp to increase bond-stress and slip resistance. https://doi.org/10.1016/j.jobe.2019.100896 [1]

Value of the Data

- This data is useful as scientific evidence about treatment methods for bamboo used as concrete reinforcement.
- This data benefits researchers and rural communities with an abundance of bamboo.
- This data includes several bamboo treatment methods that can be used as a basis for further research development.

- The data on the effects of adhesives and hose-clamps on bond strength can be used as a basis for further research, especially on tensile elements such as truss, length of distribution, etc.
- The added value of this data is that it encourages new efforts in the strengthening of bamboo reinforcement using adhesives and hose clamps for concrete reinforcement, using renewable and low-cost materials to empower poor communities in disadvantaged village areas – especially bamboo farming communities.

Data

In this article, data is presented in the form of the standard operating procedure (SOP) for bamboo reinforcement treatment, graphic images, documentation photos, and data tables. Standard operating procedure (SOP) of bamboo reinforcement treatment starts with cutting, soaking in water, draining in free air, reinforcing in the fireplace, first-stage adhesive coating, hose-clamp installation, second-stage adhesive coating, and sand resurfacing as shown in Figs. 4-11.

Raw data of bond stresses and failure patterns in bamboo reinforcement pull-out tests of seven treatments are presented in Table 1, while analysis data in the form of a graph of the relationship between bond stress and variations in bamboo reinforcement treatment is shown in Fig. 1. A data graph of the load-deflection relationship of a bamboo reinforced concrete beam, with LVDT readings from after the collapse of the beam, is shown in Fig. 2. The raw data from Fig. 2 is provided in the following link: http://bit.ly/2PvYuXS. Fig. 3 shows the load-deflection relationship of bamboo reinforced concrete beams compared to results from previous researchers. The raw data from Fig. 3 is shown in the following link: http://bit.ly/2NxiYgq.

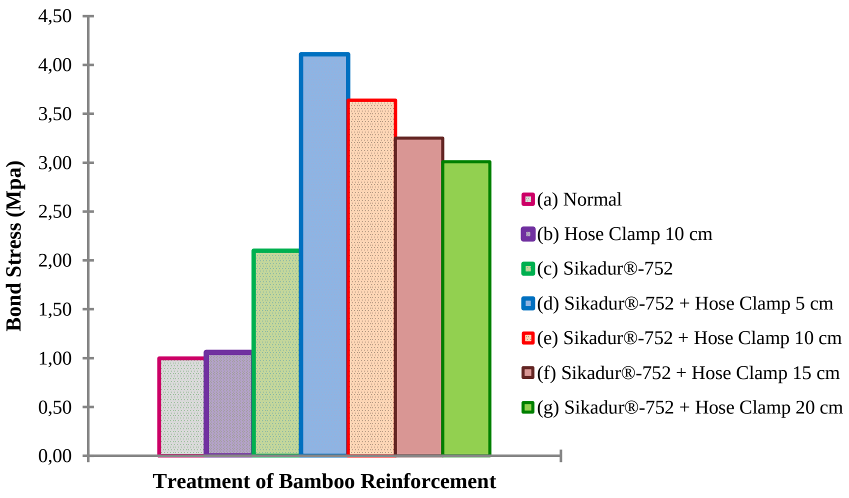

Fig. 1. The data graph of bond stress of bamboo reinforcement

Table 1
The data of bond strength and the failure pattern

Sample no	Specimens of pull-out test	Wide b (mm)	Thick t (mm)	Depth embedded in concrete cylinders (mm)	The length of the circumference of the reinforcement (mm)	Tensile load (kN)	Bond strength (MPa)	Average bond strength (MPa)	Failure pattern
1	(a) Normal	15	15	200	60	12	1,00	1	bond-slip failure
2			15		60	12	1,00		
3			10		50	10	1,00		
4	(b) Hose Clamp 10 cm	15	15	200	60	13	1,08	1,09	bond-slip failure
5			15		60	13	1,08		
6			10		50	11	1,10		
7	(c) Sikadur®-752	15	15	200	60	31	2,58	2,5	bond-slip failure
8			15		60	30	2,50		
9			15		60	29	2,42		
10	(d) Sikadur®-752 + Hose Clamp 5 cm	15	15	200	60	49	4,08	4,11	bond and concrete cone failure
11			15		60	49	4,08		
12			15		60	50	4,17		
13	(d) Sikadur®-752 + Hose Clamp 10 cm	15	15	200	60	42	3,50	3,64	bond and concrete cone failure
14			15		60	44	3,67		
15			15		60	45	3,75		
16	(d) Sikadur®-752 + Hose Clamp 15 cm	15	15	200	60	39,5	3,29	3,14	bond and concrete cone failure
17			15		60	36	3,00		
18			15		60	37,5	3,13		
19	(d) Sikadur®-752 + Hose Clamp 20 cm	15	15	200	60	35	2,92	3,01	bond and concrete cone failure
20			15		60	36	3,00		
21			15		60	37,5	3,13		

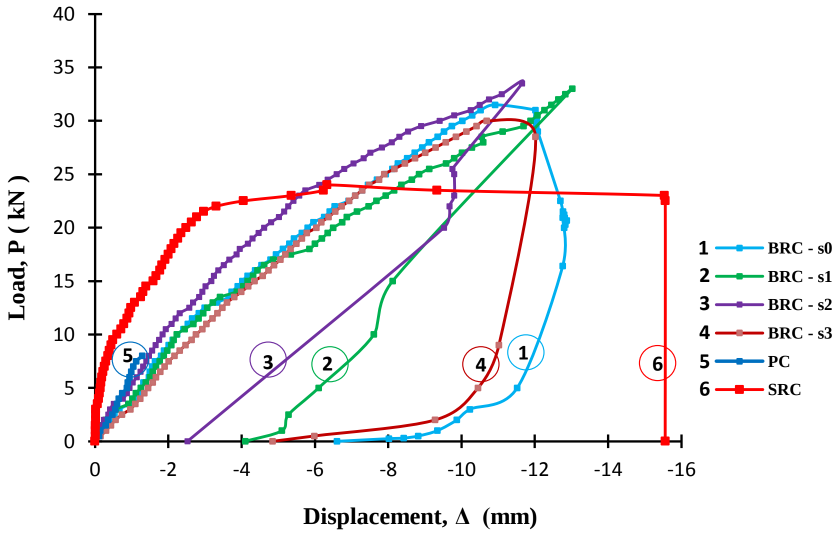

Fig. 2. The load-deflection relationship of BRC beams and the readings of LVDT after the beam collapse

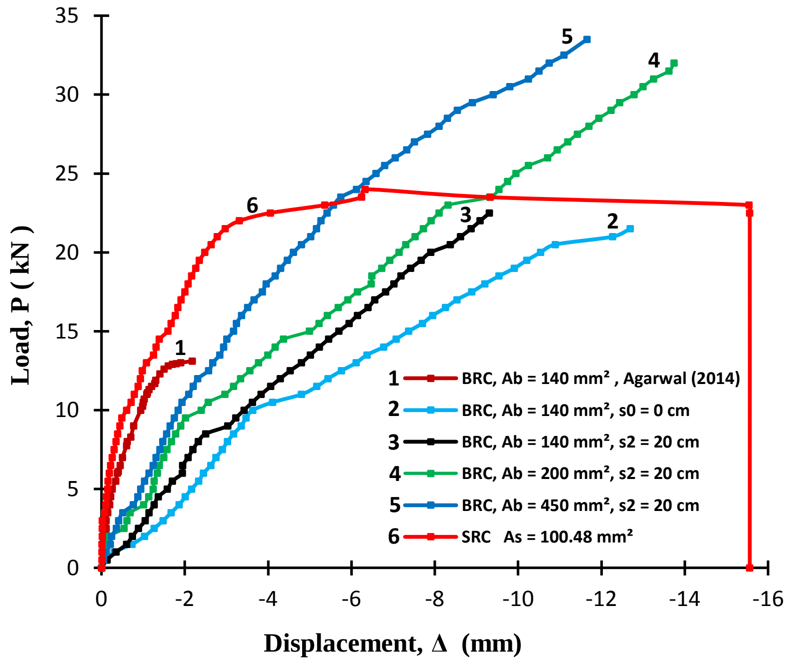

Fig. 3. The load-deflection relationship of BRC beams compared to previous research results [2]

Experimental Design, Materials, and Methods

Bamboo petung (Dendrocalamus asper), features purplish black bamboo shoots, covered with feathers (miang) which resemble brown to black velvet. The large vertebra are 40-50cm long, and 12-18cm in diameter. Overall, petung bamboo reaches 20m in height, with a curved tip, with color varying from green, dark green, purplish green, whitish green, or with white spots because of lichen. The nodes are surrounded by aerial roots. The thickness of the bamboo wall is between 11 and 36mm (Brink, M, 2008) in Wikipedia Indonesia [3].

Standard operating procedure (SOP) for preparing bamboo reinforcement includes installing hose-clamps, waterproof coating, sand coating, pull-out test setting, and flexural test setting.

Step 1: Bamboo cutting

The bamboo used was at least three years old, with white spots, as shown in Fig. 4. Bamboo stems used are 6m long from their base. This is because stems exhibit stronger mechanical properties and thickness up to 6m. After logging, bamboo is cut to the size planned, and soaked in water for more than a month. Bamboo reinforcement pieces are cut to a length of approximately 1100 x 15mm. The number of nodes varies between two and three pieces.

Step 2: Drying of bamboo in free air for ± 1 month [2,4] after soaking in water, as shown in Fig. 5.

Step 3: Fireplace treatment and adjustment of dimensions, as shown in Fig. 6.

Step 4: Fireplace and treating the surface of the bamboo reinforcement with a grinding machine, as shown in Fig. 7.

Step 5: Preparation of materials and tools, including, Sikadur®-752, fine sand, hose-clamps, and brushing, as shown in Fig.8.

Step 6: The initial coating of adhesive Sikadur®-752, and installation of hose-clamps on the bamboo reinforcement, as shown in Fig. 9 and Fig. 10.

Instructions for installing hose-clamps:

- The initial stage of Sikadur®-752 adhesive surfacing is carried out after the fireplace treatment, based on the planned dimensions
- Sikadur®-752 surfacing is carried out until it is even.
- Installation of hose-clamps is carried out after the first Sikadur®-752 layer is dry.
- The hose-clamps are installed in two ways, namely (1) by loosening the nut-bolts of the hose-clamps and directly inserting from the end of the bamboo reinforcement, or (2) opening the hose-clamps and installing them at the point of the installation plan.
- Hose-clamps are tightened with a screwdriver, turned until it stops. There should be no additional tightening, so as to avoid defects and waterproof coating leaks on the bamboo reinforcement.
- After the clamps are installed, a second Sikadur®-752 surfacing is carried out.
- The coating of sand on bamboo reinforcement is applied after the second layer of Sikadur®-752 adhesive is half dry, as shown in Fig. 11.

Step 7: The construction of pull-out test specimens and flexural test specimens of bamboo reinforcement, as shown in Fig. 12.

Step 8: Pull-out test setting. The bamboo reinforcement bond strength test uses a conventional pull-out test method [5]. Specimen details and pull-out test settings are shown in Fig. 13 and Fig. 14.

Step 9: The flexural test setting. This employs the four-point flexural test method. Details, geometry, and flexural test settings are shown in Fig. 15 and Fig. 16.

Fig. 4. Bamboo petung (Dendrocalamus asper) at the felling site

Fig. 5. Drying of bamboo in free air for ± 1 month after soaking

Fig. 6. Exfoliating the inside of the bamboo and adjusting the dimensions of the bamboo to the reinforcement plan.

Fig. 7. Fireplace; treating the surface of bamboo reinforcement with a grinding machine.

Fig. 8. Bamboo reinforcement of bamboo, Sikadur®-752, fine sand, hose-clamps, brushes, and steel stirrups.

Fig. 9. The initial surfacing of Sikadur®-752 adhesive

Fig. 10. The installation of hose-clamps and the second layer of Sikadur®-752 adhesive

Fig. 11. Fine sand surfacing (volcanic dust from Raung Mountain, Jember, Indonesia)

Fig. 12. Preparing pull-out test and flexural test specimens

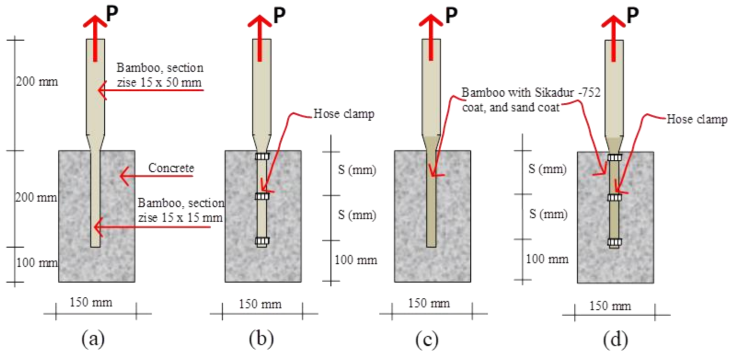

Fig. 13. Specimen details for the pull-out test

Fig. 14. Pull-out test settings

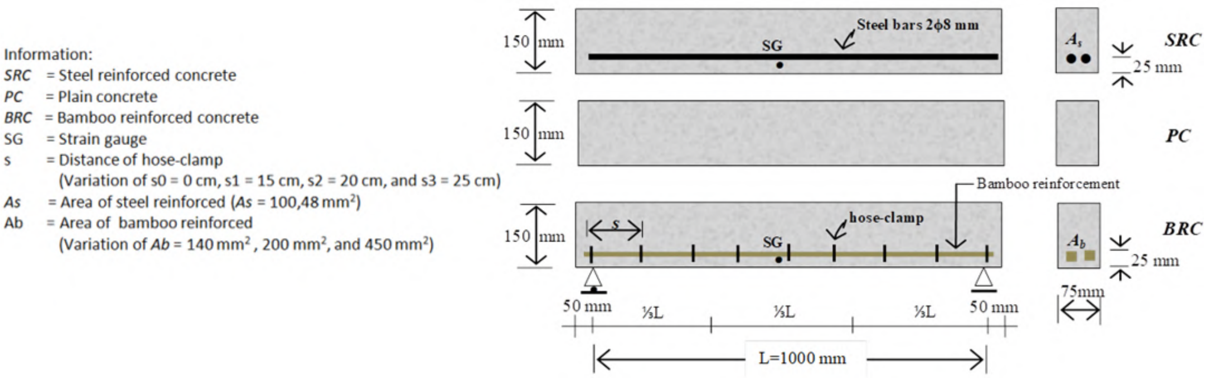

Fig. 15. Detail and geometry of the bamboo reinforced concrete beam

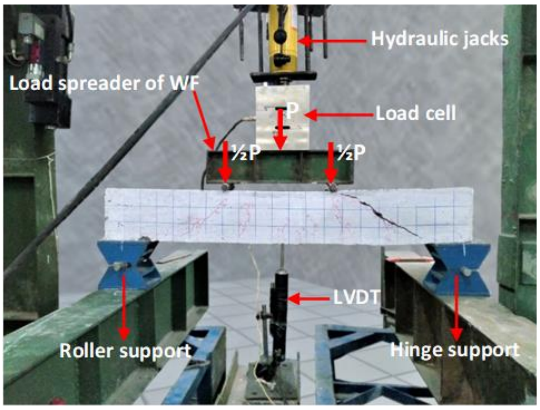

Fig. 16. Flexural test settings for the four-point flexural test method

Acknowledgments

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References

[1] Muhtar, S.M. Dewi, Wisnumurti, A. Munawir, Enhancing bamboo reinforcement using a hose-clamp to increase bond- stress and slip resistance, Journal of Building Engineering. 26 (2019) 100896. doi:https://doi.org/10.1016/j.jobe.2019.100896.

[2] A. Agarwal, B. Nanda, D. Maity, Experimental investigation on chemically treated bamboo reinforced concrete beams and columns, Construction and Building Materials. 71 (2014) 610–617. doi:https://doi.org/10.1016/j.conbuildmat.2014.09.011.

[3] W. Indonesia, Bambu petung.pdf, (2016). https://id.wikipedia.org/wiki/Bambu_betung.

[4] M.M. Rahman, M.H. Rashid, M.A. Hossain, M.T. Hasan, M.K. Hasan, Performance evaluation of bamboo reinforced concrete beam, International Journal of Engineering & Technology IJET-IJENS. 11 (2011) 113–118.

[5] K. Ghavami, Bamboo as reinforcement in structural concrete elements, Cement and Concrete Composites. 27 (2005) 637–649. doi:https://doi.org/10.1016/j.cemconcomp.2004.06.002.

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Data

In this article, data is presented in the form of the standard operating procedure (SOP) for bamboo reinforcement treatment, graphic images, documentation photos, and data tables. Standard operating procedure (SOP) of bamboo reinforcement treatment starts with cutting, soaking in water, draining in free air, reinforcing in the fireplace, first-stage adhesive coating, hose-clamp installation, second-stage adhesive coating, and sand resurfacing as shown in Figs. 4-11.

Raw data of bond stresses and failure patterns in bamboo reinforcement pull-out tests of seven treatments are presented in Table 1, while analysis data in the form of a graph of the relationship between bond stress and variations in bamboo reinforcement treatment is shown in Fig. 1. A data graph of the load-deflection relationship of a bamboo reinforced concrete beam, with LVDT readings from after the collapse of the beam, is shown in Fig. 2. The raw data from Fig. 2 is provided in the following link: http://bit.ly/2PvYuXS. Fig. 3 shows the load-deflection relationship of bamboo reinforced concrete beams compared to results from previous researchers. The raw data from Fig. 3 is shown in the following link: http://bit.ly/2NxiYgq.

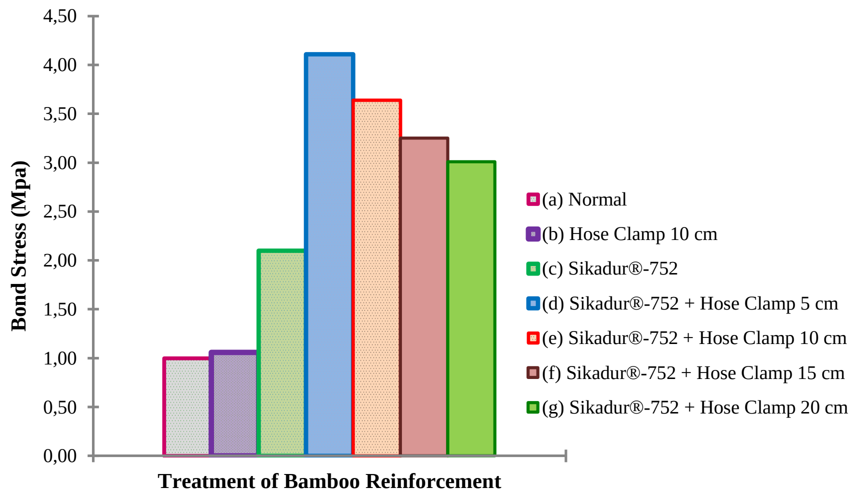

Fig. 1. The data graph of bond stress of bamboo reinforcement

Table 1
The data of bond strength and the failure pattern

Sample no	Specimens of pull-out test	Wide b (mm)	Thick t (mm)	Depth embedded in concrete cylinders (mm)	The length of the circumference of the reinforcement (mm)	Tensile load (kN)	Bond strength (MPa)	Average bond strength (MPa)	Failure pattern
1	(a) Normal	15	15	200	60	12	1,00	1	bond-slip failure
2			15		60	12	1,00		
3			10		50	10	1,00		
4	(b) Hose Clamp 10 cm	15	15	200	60	13	1,08	1,09	bond-slip failure
5			15		60	13	1,08		
6			10		50	11	1,10		
7	(c) Sikadur®-752	15	15	200	60	31	2,58	2,5	bond-slip failure
8			15		60	30	2,50		
9			15		60	29	2,42		
10	(d) Sikadur®-752 + Hose Clamp 5 cm	15	15	200	60	49	4,08	4,11	bond and concrete cone failure
11			15		60	49	4,08		
12			15		60	50	4,17		
13	(d) Sikadur®-752 + Hose Clamp 10 cm	15	15	200	60	42	3,50	3,64	bond and concrete cone failure
14			15		60	44	3,67		
15			15		60	45	3,75		
16	(d) Sikadur®-752 + Hose Clamp 15 cm	15	15	200	60	39,5	3,29	3,14	bond and concrete cone failure
17			15		60	36	3,00		
18			15		60	37,5	3,13		
19	(d) Sikadur®-752 + Hose Clamp 20 cm	15	15	200	60	35	2,92	3,01	bond and concrete cone failure
20			15		60	36	3,00		
21			15		60	37,5	3,13		

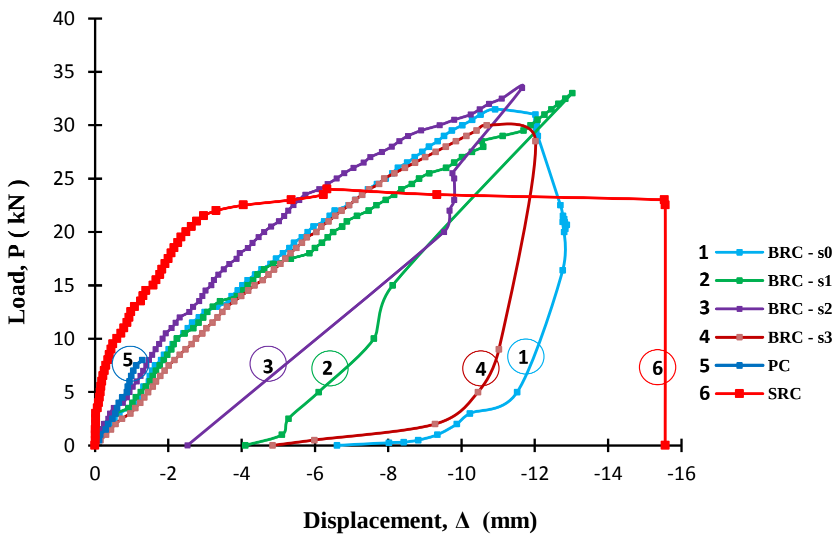

Fig. 2. The load-deflection relationship of BRC beams and the readings of LVDT after the beam collapse

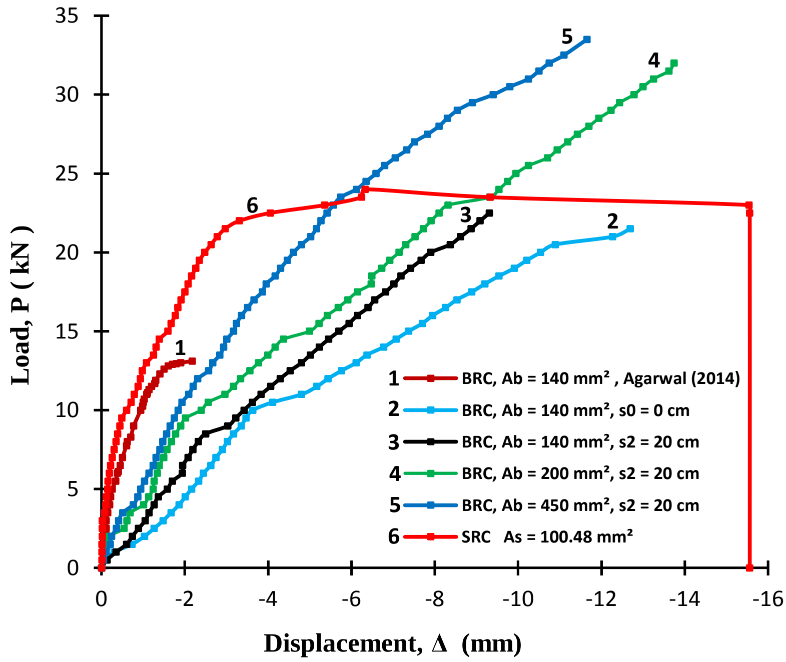

Fig. 3. The load-deflection relationship of BRC beams compared to previous research results [2]

Experimental Design, Materials, and Methods

Bamboo petung (Dendrocalamus asper), features purplish black bamboo shoots, covered with feathers (miang) which resemble brown to black velvet. The large vertebra are 40-50cm long, and 12-18cm in diameter. Overall, petung bamboo reaches 20m in height, with a curved tip, with color varying from green, dark green, purplish green, whitish green, or with white spots because of lichen. The nodes are surrounded by aerial roots. The thickness of the bamboo wall is between 11 and 36mm (Brink, M, 2008) in Wikipedia Indonesia [3].

Standard operating procedure (SOP) for preparing bamboo reinforcement includes installing hose-clamps, waterproof coating, sand coating, pull-out test setting, and flexural test setting.

Step 1: Bamboo cutting

The bamboo used was at least three years old, with white spots, as shown in Fig. 4. Bamboo stems used are 6m long from their base. This is because stems exhibit stronger mechanical properties and thickness up to 6m. After logging, bamboo is cut to the size planned, and soaked in water for more than a month. Bamboo reinforcement pieces are cut to a length of approximately 1100 x 15mm. The number of nodes varies between two and three pieces.

Step 2: Drying of bamboo in free air for ± 1 month [2,4] after soaking in water, as shown in Fig. 5.

Step 3: Fireplace treatment and adjustment of dimensions, as shown in Fig. 6.

Step 4: Fireplace and treating the surface of the bamboo reinforcement with a grinding machine, as shown in Fig. 7.

Step 5: Preparation of materials and tools, including, Sikadur®-752, fine sand, hose-clamps, and brushing, as shown in Fig.8.

Step 6: The initial coating of adhesive Sikadur®-752, and installation of hose-clamps on the bamboo reinforcement, as shown in Fig. 9 and Fig. 10.

Instructions for installing hose-clamps:

- The initial stage of Sikadur®-752 adhesive surfacing is carried out after the fireplace treatment, based on the planned dimensions
- Sikadur®-752 surfacing is carried out until it is even.
- Installation of hose-clamps is carried out after the first Sikadur®-752 layer is dry.
- The hose-clamps are installed in two ways, namely (1) by loosening the nut-bolts of the hose-clamps and directly inserting from the end of the bamboo reinforcement, or (2) opening the hose-clamps and installing them at the point of the installation plan.
- Hose-clamps are tightened with a screwdriver, turned until it stops. There should be no additional tightening, so as to avoid defects and waterproof coating leaks on the bamboo reinforcement.
- After the clamps are installed, a second Sikadur®-752 surfacing is carried out.
- The coating of sand on bamboo reinforcement is applied after the second layer of Sikadur®-752 adhesive is half dry, as shown in Fig. 11.

Step 7: The construction of pull-out test specimens and flexural test specimens of bamboo reinforcement, as shown in Fig. 12.

Step 8: Pull-out test setting. The bamboo reinforcement bond strength test uses a conventional pull-out test method [5]. Specimen details and pull-out test settings are shown in Fig. 13 and Fig. 14.

Step 9: The flexural test setting. This employs the four-point flexural test method. Details, geometry, and flexural test settings are shown in Fig. 15 and Fig. 16.

Fig. 4. Bamboo petung (Dendrocalamus asper) at the felling site

Fig. 5. Drying of bamboo in free air for ± 1 month after soaking

Fig. 6. Exfoliating the inside of the bamboo and adjusting the dimensions of the bamboo to the reinforcement plan.

Fig. 7. Fireplace; treating the surface of bamboo reinforcement with a grinding machine.

Fig. 8. Bamboo reinforcement of bamboo, Sikadur®-752, fine sand, hose-clamps, brushes, and steel stirrups.

Fig. 9. The initial surfacing of Sikadur®-752 adhesive

Fig. 10. The installation of hose-clamps and the second layer of Sikadur®-752 adhesive

Fig. 11. Fine sand surfacing (volcanic dust from Raung Mountain, Jember, Indonesia)

Fig. 12. Preparing pull-out test and flexural test specimens

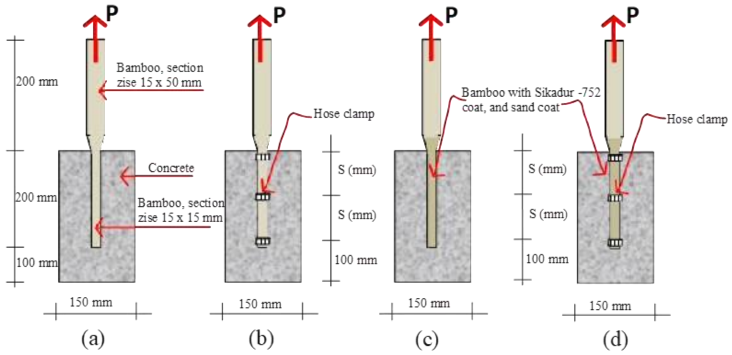

Fig. 13. Specimen details for the pull-out test

Fig. 14. Pull-out test settings

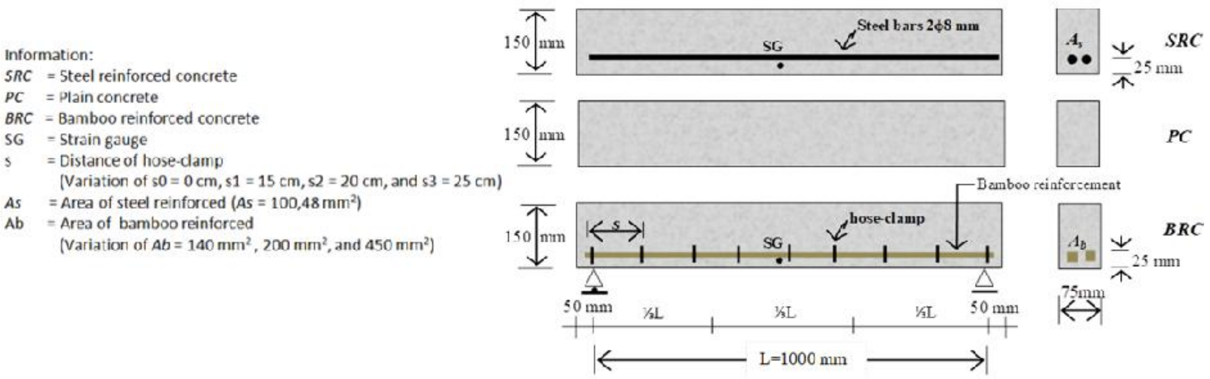

Fig. 15. Detail and geometry of the bamboo reinforced concrete beam

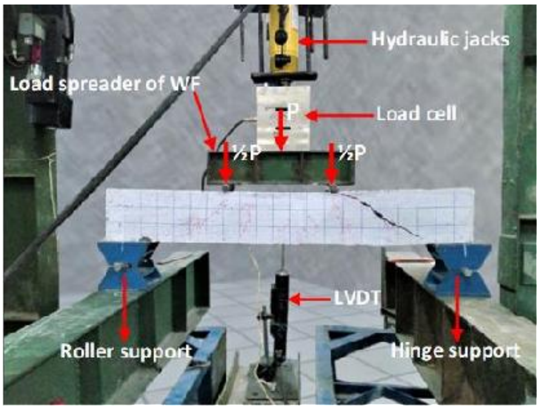

Fig. 16. Flexural test settings for the four-point flexural test method

Acknowledgments

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References

[1] Muhtar, S.M. Dewi, Wisnumurti, A. Munawir, Enhancing bamboo reinforcement using a hose-clamp to increase bond- stress and slip resistance, Journal of Building Engineering. 26 (2019) 100896. doi:https://doi.org/10.1016/j.jobe.2019.100896.

[2] A. Agarwal, B. Nanda, D. Maity, Experimental investigation on chemically treated bamboo reinforced concrete beams and columns, Construction and Building Materials. 71 (2014) 610–617. doi:https://doi.org/10.1016/j.conbuildmat.2014.09.011.

[3] W. Indonesia, Bambu petung.pdf, (2016). https://id.wikipedia.org/wiki/Bambu_betung.

[4] M.M. Rahman, M.H. Rashid, M.A. Hossain, M.T. Hasan, M.K. Hasan, Performance evaluation of bamboo reinforced concrete beam, International Journal of Engineering & Technology IJET-IJENS. 11 (2011) 113–118.

[5] K. Ghavami, Bamboo as reinforcement in structural concrete elements, Cement and Concrete Composites. 27 (2005) 637–649. doi:https://doi.org/10.1016/j.cemconcomp.2004.06.002.

*REVISED Manuscript(Text with changes MARKED)

Click here to view linked References

Article Title

Experimental data ~~of~~ from strengthening ~~of~~ bamboo reinforcement using adhesives and hose-clamps

Affiliations

Department of Civil Engineering, Faculty of Engineering, University of Muhammadiyah Jember, Jember, 68121, Indonesia

Abstract

The bamboo treatment process ~~of bamboo~~ starts ~~from~~ with cutting, soaking in water, draining~~ed~~ in free air, reinforcing in the fireplace ~~of Bamboo reinforcement~~, first-stage adhesive coating, hose-clamp installation, second-~~-~~stage adhesive coating, and sand resurfacing. Data ~~were~~ was taken from experimental testing of bamboo materials and bond strength tests of bamboo reinforcement in the l~~L~~aboratory of the Faculty of Engineering, University of Brawijaya Malang. The aim of treating~~ment~~ and strengthening ~~of~~ bamboo reinforcement is to overcome ~~the~~ low-~~-~~load capacity and prevent collapse due to slippage ~~on~~ in bamboo reinforced concrete elements. Adhesive coating is employed to increase durability and prevent water absorption, while i~~. I~~nstalling~~ation of~~ hose-clamps ~~to~~ increases ~~of~~ bamboo reinforcement slip resistance. The ~~treatment~~ process outlined here represents the way to approach~~contains how to treat~~ bamboo reinforcement, and l~~. L~~aboratory data is processed into graphic images and tables of ~~data of~~ bond strength of bamboo reinforcement~~, which can be used as~~ providing the basis for further research. ~~In~~ T~~t~~his article comprises~~, there is~~ a standard operating procedure ~~of~~ for treatment of bamboo reinforcement, graphic images, documentation photos, and data tables. The data is related to "Enhancing bamboo reinforcement using a hose-clamp to increase bond-stress and slip resistance" [1].

Keywords

bond strength, bamboo reinforcement, strengthening, bamboo

Specifications Table

Subject	Engineering
Specific subject area	Civil and Structural Engineering
Type of data	Table, image

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How data were acquired	Data ~~were~~ was obtained from two experimental tests, namely the pull-out test (Fig. 14) and the beam flexural test (Fig. 16). Then, the test data is processed and analyzed into table data, image data, and documentation data
Data format	Raw and analyzed
Parameters for data collection	The main requirement for using bamboo as a concrete reinforcement is initial treatment ~~first~~. This~~e treatment~~ involves the use of~~s~~ adhesives and hose-clamps to effectively increase the bond strength of bamboo reinforcement. Therefore a standard operating~~ion~~ procedure and test data ~~are~~ need to be established~~ed~~ for the development of further research
Description of data collection	Bond strength data was obtained from testing bamboo reinforcement specimens ~~test with~~after different treatments. ~~The D~~Data from~~of~~ each specimen is processed and analyzed into table data, image data, and photo data which ~~is then called~~are described as single data. This~~en~~ single data is collected together, processed, compared, re-analyzed into table data, image data, and photo data, which is then called intact data
Data source location	University of Muhammadiyah Jember, Jember, 68121, Indonesia, and University of Brawijaya, Malang 65145, Indonesia
Data accessibility	Data with the article
Related research article	Enhancing bamboo reinforcement using a hose-clamp to increase bond-stress and slip resistance. https://doi.org/10.1016/j.jobe.2019.100896

Value of the Data

- This data is useful as ~~a~~ scientific evidence~~ce~~ about ~~bamboo~~ treatment methods for bamboo ~~to be~~ used as concrete reinforcement.
- This data benefits ~~for~~ researchers and rural communities with ~~lots~~ an abundance of bamboo~~s~~.
- ~~In T~~This data includes~~,~~ ~~there are~~ several bamboo treatment~~s~~ methods that can be used as a basis~~e~~ for further research development.
- The data on~~f~~ the effects of adhesives and hose-clamps on bond strength can be used as a basis~~e~~ for further research, especially on tensile elements such as truss, length of distribution, etc.

- The added value of this data is ~~a~~ that it encourages new efforts in ~~of~~ the strengthening of bamboo reinforcement using adhesives and hose clamps ~~as~~ for concrete reinforcement, ~~and~~ using renewable and low-cost materials to empower~~ing~~ poor communities in disadvantaged village areas – ~~, with renewable and lowcost materials,~~ especially bamboo farming communities.

Data

In this article, data is presented in the form of the standard operating procedure (SOP) ~~of~~ for bamboo reinforcement treatment, graphic images, documentation photos, and data tables. Standard operating procedure (SOP) of ~~the~~ bamboo reinforcement treatment starts ~~from~~ with cutting, soaking in water, draining~~ged~~ in free air, reinforcing in the fireplace~~s of bamboo reinforcement~~, first-stage adhesive coating~~s~~, hose-clamp installation~~s~~, second-~~-~~stage adhesive coating~~s~~, and sand resurfacing, as shown in Figs. 4-11.

Raw data of ~~the~~ bond stresses and ~~the~~ failure patterns ~~of the~~in bamboo reinforcement pull-out tests of ~~with~~ seven treatments are presented in Table 1, while analysis data in the form of a graph of the relationship between bond stress and variations in bamboo reinforcement ~~of~~ treatment ~~of bamboo reinforcement~~ is shown in Fig. 1. A d~~D~~ata graph of the load-deflection relationship of a bamboo reinforced concrete beam, with LVDT ~~the~~ readings ~~of~~ from ~~LVDT until~~ after the collapse of the beam, ~~s are~~ is shown in Fig. 2. The raw data from Fig~~s~~. 2 is ~~shown~~ provided in the following link: http://bit.ly/2PvYuXS. ~~And~~ Fig. 3 shows the l~~L~~oad-deflection relationship ~~diagram~~ of bamboo reinforced concrete beams compared to results from previous researchers. The raw data from Fig. 3 is shown in the following link: http://bit.ly/2NxiYgq.

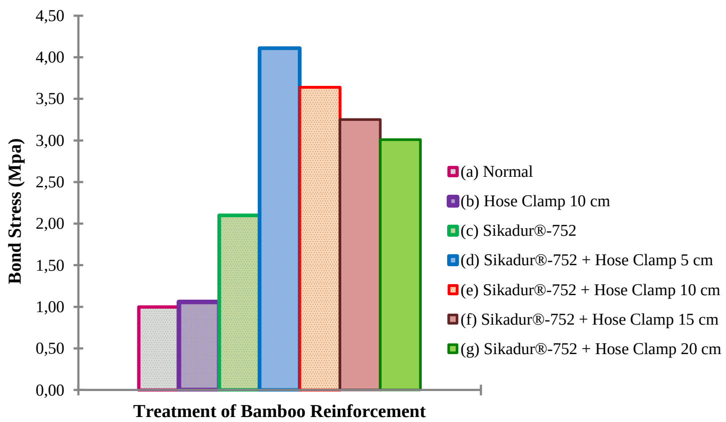

Fig. 1. The data graph of bond stress of bamboo reinforcement

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Table 1

The data of bond strength and the failure pattern

Sample no	Specimens of pull-out test	Wide b (mm)	Thick t (mm)	Depth embedded in concrete cylinders (mm)	The length of the circumference of the reinforcement (mm)	Tensile load (kN)	Bond strength (MPa)	Average bond strength (MPa)	Failure pattern
1			15		60	12	1,00		
2	(a) Normal	15	15	200	60	12	1,00	1	bond-slip failure
3			10		50	10	1,00		
4			15		60	13	1,08		
5	(b) Hose Clamp 10 cm	15	15	200	60	13	1,08	1,09	bond-slip failure
6			10		50	11	1,10		
7			15		60	31	2,58		
8	(c) Sikadur®-752	15	15	200	60	30	2,50	2,5	bond-slip failure
9			15		60	29	2,42		
10			15		60	49	4,08		
11	(d) Sikadur®-752 + Hose Clamp 5 cm	15	15	200	60	49	4,08	4,11	bond and concrete cone failure
12			15		60	50	4,17		
13			15		60	42	3,50		
14	(d) Sikadur®-752 + Hose Clamp 10 cm	15	15	200	60	44	3,67	3,64	bond and concrete cone failure
15			15		60	45	3,75		
16			15		60	39,5	3,29		
17	(d) Sikadur®-752 + Hose Clamp 15 cm	15	15	200	60	36	3,00	3,14	bond and concrete cone failure
18			15		60	37,5	3,13		
19			15		60	35	2,92		
20	(d) Sikadur®-752 + Hose Clamp 20 cm	15	15	200	60	36	3,00	3,01	bond and concrete cone failure
21			15		60	37,5	3,13		

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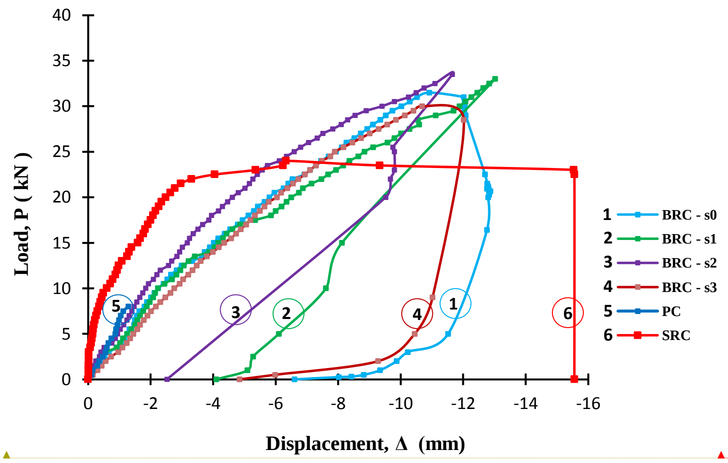

Fig. 2. The load-deflection relationship of BRC beams and the readings of LVDT ~~until~~ after the beam collapse

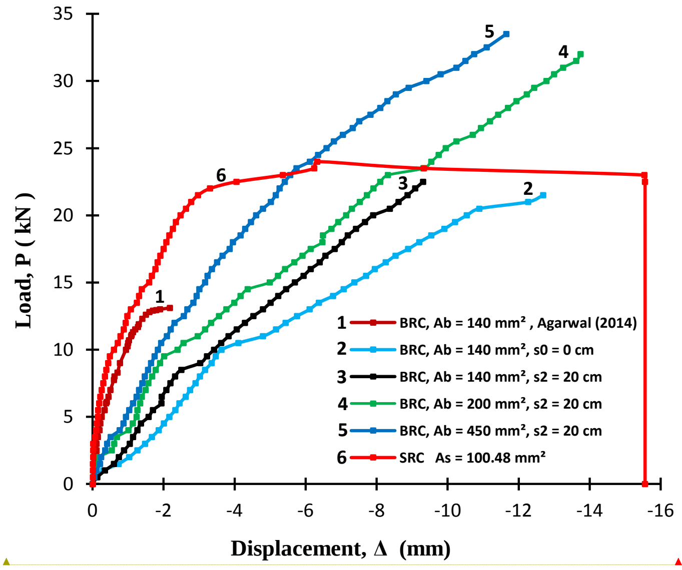

Fig. 3. The l~~L~~oad-deflection relationship of BRC beams compared to previous research results~~ers~~ [2]

Experimental Design, Materials, and Methods

Bamboo petung (Dendrocalamus asper), features purplish black bamboo shoots, covered with feathers (miang) ~~like~~ which resemble brown to black velvet~~ to black~~. The l~~L~~arge~~ sized,~~ vertebra are 40-50cm long, and ~~is 40-50 cm, and~~ 12-18cm in diameter. O~~is 12-18 cm, o~~verall, petung bamboo reaches 20~~-~~m in height,~~high~~ with a curved tip, with~~the~~ color varying~~ies~~ from green, dark green, purplish green, whitish green, or with white spots because of lichen. ~~His~~ The nodes are surrounded by aerial roots. The thickness of the bamboo wall is between 11 ~~to~~ and 36~~-~~mm (Brink, M, 2008) in Wikipedia Indonesia [3].

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~~The S~~standard operating procedure (SOP) for ~~the~~ preparing ~~of~~ bamboo reinforcement includes~~,~~ installing~~ation of~~ hose-clamps, waterproof coating, sand coating, pull-out test setting, and flexural test setting.~~:~~

Step 1: ~~The B~~bamboo cutting

The bamboo used was at least three~~3~~ years old, with white spots, as shown in Fig. 4. Bamboo stems used ~~is~~ are 6m~~-meters~~ long from their base~~-of the stem~~. This is because ~~it has~~stems exhibit stronger~~-greater~~ mechanical properties and thickness ~~than the stem section after 6 meters~~up to 6m. After logging, ~~the~~ bamboo is cut to the ~~the~~ size planned, and soaked in water for more than a~~1~~ month. Bamboo reinforcement ~~cut into~~ pieces ~~with~~ are cut to a length of approximately 1100~~-mm~~ x 15-mm. The number of nodes ~~of bamboo reinforcement nodes~~ varies between two and three~~2-3~~ pieces.

Step 2: Drying of bamboo in free air for ± 1 month [2,4] after soaking in ~~the~~ water, as shown in Fig. 5.

Step 3: Fireplace treatment and adjustment of dimensions, ~~of bamboo reinforcement~~ as shown in Fig. 6.

Step 4: Fireplace and treating the surface of the bamboo reinforcement with a grinding machine, as shown in Fig. 7.

Step 5: Preparation of materials and tools, including~~-that consist of reinforcement of bamboo~~, Sikadur®-752, fine sand, hose-clamps, and brushing, as shown in Fig.8.

Step 6: The initial coating of adhesive Sikadur®-752, ~~initial stage~~ and ~~the~~ installation of hose-clamps on the bamboo reinforcement, as shown in Fig. 9 and Fig. 10.

Instructions for installing hose-clamps:

- The initial stage of Sikadur®-752 adhesive ~~re~~surfacing ~~was~~ is carried out after the ~~bamboo reinforcement~~ fireplace treatment, ~~according to~~based on the planned dimensions.
- ~~The resurfacing of~~ Sikadur®-752 surfacing is carried out until it is even.
- Installation of hose-clamps is carried out after the first ~~stage~~ Sikadur®-752 layer is dry.
- The hose-clamps are installed in two ways, namely (1) by loosening the nut-bolts of the hose-clamps and directly inserting from the end of the bamboo reinforcement, or (2) ~~and~~ opening the hose-clamps~~,~~ and installing them at the point of the installation plan.
- ~~The tightening of the h~~Hose-clamps ~~using~~ are tightened with a screwdriver, turned ~~and doing it~~ until ~~the screwdriver~~it stops. T~~, t~~here should be no ~~repetitive~~ additional tightening, ~~with the aim of~~so as to avoid~~ing~~ defects and waterproof coating leaks on the bamboo reinforcement.
- After the clamps are installed, a second Sikadur®-752 ~~re~~surfacing is carried out.
- The coating of sand on bamboo reinforcement is ~~carried out~~applied after the second ~~stage~~ layer of Sikadur®-752 adhesive is half dry, as shown in Fig. 11.

Step 7: The ~~making~~ construction of ~~the~~ pull-out test specimens and flexural test specimens of bamboo reinforcement, as shown in Fig. 12.

Step 8: ~~The P~~pull-out test setting. The bamboo reinforcement bond strength test uses ~~the~~ a c~~C~~onventional pull-out test method [5]. ~~The S~~specimen details and ~~the~~ pull-out test settings are shown in Fig. 13 and Fig. 14.

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Step 9: The flexural test setting. This employs~~e~~ ~~flexural test setting is done with~~ the four-point flexural test method. ~~-~~Details, geometry, and flexural test settings are shown in Fig. 15 and Fig. 16.

Fig. 4. Bamboo petung (Dendrocalamus asper) at the felling site

Fig. 5. Drying of bamboo in free air for ± 1 month after soaking

Fig. 6. ~~The~~ E~~e~~xfoliating the inside of the bamboo and adjusting the dimensions of the bamboo to the reinforcement plan.

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Fig. 7. Fireplace; treating the surface of bamboo reinforcement with a grinding machine.

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Fig. 8. Bamboo r~~R~~einforcement of bamboo, Sikadur®-752, fine sand, hose-clamps, brushes, and steel stirrups.

Fig. 9. The initial ~~re~~surfacing of Sikadur®-752 adhesive ~~on bamboo reinforcement~~

Fig. 10. The installation of hose-clamps and the second ~~resurfacing~~ layer of Sikadur®-752 adhesive ~~on bamboo reinforcement~~

Fig. 11. ~~The F~~fine sand ~~re~~surfacing (volcanic dust ~~of~~ from Raung Mountain, Jember, Indonesia)

Fig. 12. ~~The making of the~~Preparing pull-out test ~~specimen~~ and flexural test specimens

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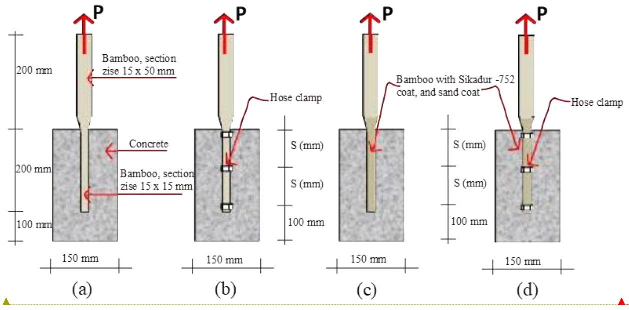

Fig. 13. ~~The~~ ~~S~~specimen details ~~of~~ for the pull-out test

Fig. 14. ~~The~~ ~~P~~pull-out test settings

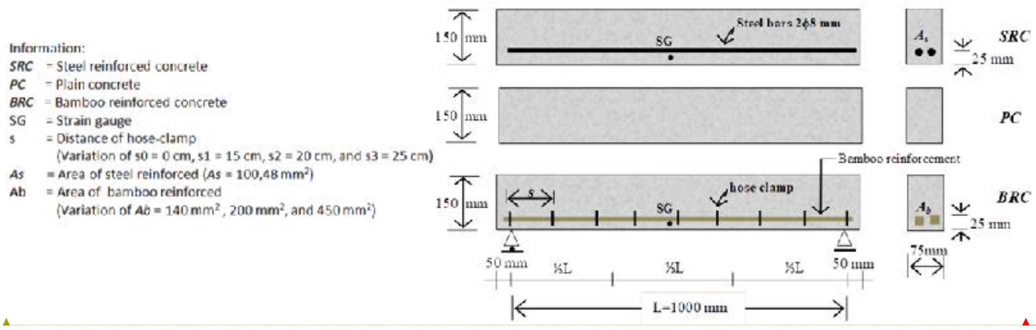

Fig. 15. Detail and geometry of the bamboo reinforced concrete beam

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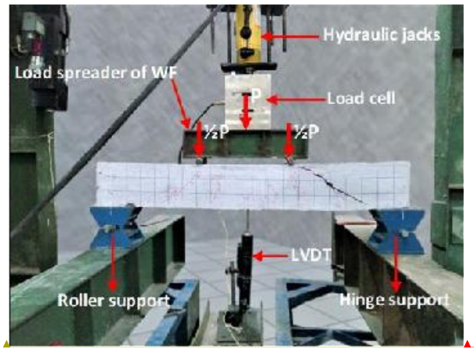

Fig. 16. ~~The F~~flexural test settings for ~~with~~ the four-point flexural test method

Acknowledgments

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References

[1] Muhtar, S.M. Dewi, Wisnumurti, A. Munawir, Enhancing bamboo reinforcement using a hose-clamp to increase bond-stress and slip resistance, Journal of Building Engineering. 26 (2019) 100896. doi:https://doi.org/10.1016/j.jobe.2019.100896.

[2] A. Agarwal, B. Nanda, D. Maity, Experimental investigation on chemically treated bamboo reinforced concrete beams and columns, Construction and Building Materials. 71 (2014) 610–617. doi:https://doi.org/10.1016/j.conbuildmat.2014.09.011.

[3] W. Indonesia, Bambu petung.pdf, (2016). https://id.wikipedia.org/wiki/Bambu_betung.

[4] M.M. Rahman, M.H. Rashid, M.A. Hossain, M.T. Hasan, M.K. Hasan, Performance evaluation of bamboo reinforced concrete beam, International Journal of Engineering & Technology IJET-IJENS. 11 (2011) 113–118.

[5] K. Ghavami, Bamboo as reinforcement in structural concrete elements, Cement and Concrete Composites. 27 (2005) 637–649. doi:https://doi.org/10.1016/j.cemconcomp.2004.06.002.

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