BRUNEI DARUSSALAM STANDARD
PIAWAI BRUNEI DARUSSALAM

PBD 2 : 2022
(Second Edition)

SPECIFICATION FOR WELDED STEEL FABRIC FOR THE REINFORCEMENT OF CONCRETE

NATIONAL STANDARDS COUNCIL

BRUNEI DARUSSALAM

Published by
National Standards Centre

Attention is drawn to the fact that this Brunei Darussalam Standard does not confer any immunity from legal obligations in any contract for compliance to the Standard.

The Brunei Darussalam Standards are subject to periodical review according to the current needs of the local industries and to keep abreast of progress in the industries concerned. Suggestions of amendments will be recorded and in due course brought to the notice of the committees concerned.

Disclaimer:

1.) *Brunei Darussalam Standards are subject to periodic review with references to technological changes and new developments. Any changes made hereafter are documented through the issue of either amendments or revisions.*

2.) *Compliance with this Brunei Darussalam Standard does not exempt users from legal obligations or purport to include all the necessary provisions of a contract.*

3.) *This PBD 2: 2022 does not purport to include all the necessary provisions of a contract*

Amendments issued since publication

Amd No	Date of issue	Text affected

Brief Intro on National Standards Council

Formed in 2009, the Council is envisioned to act as the body responsible for strengthening and monitoring standards and conformance in Brunei Darussalam. Its members encompass multiple agencies across the Government, industry and consumer interests and are envisaged to provide policy direction that will firm up national initiatives to create and stimulate sustainable economic growth. In this endeavor, factors such as the creation and promotion of awareness on consumer safety and interests will also form part of the main scope of the council.

The work of the council is facilitated by the National Standards Centre (NSC), under the Ministry of Finance and Economy. With the main role of strengthening the capacity and sustainability of the national standards infrastructure, the NSC has been instructed to act as a body that provides a platform to complement the formation of the Council.

On matters pertaining to the development of national standards i.e. Piawai Brunei Darussalam (PBD), the management of activities are monitored through the formation of National Standards Committees. Clustered based on the scope of its industry, the work of developing PBD stands guided by international practice with the involvement of multiple agencies across the Government, industry and public as a whole.

Further Information on Piawai Brunei Darussalam, Please Contact:

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COMMITTEE REPRESENTATION

The Technical Committee on Iron and Steel was entrusted by the Ministry of Development for the preparation of this Brunei Darussalam Standard. The members of the Technical Committee in 2017 were as follows:

Chair:

Organisation	Name
Department of Technical Services, Public Works Department	Awang Haji Azhan bin Haji Abdul Karim

Co-Chair:

Organisation	Name
INMEC Consortium Sdn Bhd	Awang Michael Khoo

Secretariat:

Organisation	Name
Authority for Building Control and Construction Industry (ABCi), Ministry of Development	Dayang Hajah Siti Aidah binti Haji Mohammad Dayang Nurul Jannah binti Haji Alim Dayang Siti Yusliyana binti Mohamed Yussof

Members:

Organisation	Name
Department of Technical Services, Public Works Department	Dayang Hajah Adinah binti Haji Mohd Jaya Awang Muhammad Hamdi bin Haji Tengah
Brunei Shell Petroleum	Awang Mohd Shahril bin Haji Maidin
Universiti Brunei Darussalam	Dayang Dr. Juliana binti Haji Zaini
Universiti Teknologi Brunei	Awang Dr. Lim Pang Jen Awang Dr. Ahmad Syamaizar bin Haji Ahmad Sabli
Menara Gemilang Sdn Bhd	Awang John Ng Khin Hong
Jurutera Tempatan	Awang Alvin Kong
Jurusy Perunding	Awang Yong Teck Chin
Ove Arup dan Rakan-Rakan	Awang Lim Siew Yong
Jurutera OMC	Awang Andrew Seah
L & W Sepakat Sdn Bhd	Awang Lim Tiew Beng

FOREWORD

The publication of Brunei Darussalam Standard, (Piawaian Brunei Darussalam) PBD 2:2022 was prepared by Technical Committee on Iron and Steel.

This Standard is an adaptation of International Organization for Standardization (ISO 6935-3:1992).

This Standard has been written so that it can be used in conjunction with the following other related ISO Standards or their latest editions:

PBD 3:2016	Specification for Steel Ribbed Bars for the Reinforcement of Concrete
PBD 4:1992	Specification for scheduling, dimensioning, bending and cutting of steel reinforcement for concrete
PBD 5:1992	Specification for cold reduced steel wire for the reinforcement of concrete
ISO 404:2013	Steel and steel products – General technical delivery requirements
ISO 6892-1:2009	Metallic materials – Tensile testing – Part 1: Method of test at room temperature
ISO 6935-1:2007	Steel for the reinforcement of concrete – Part 1: Plain Bars
ISO 6935-2	Steel for the reinforcement of concrete – Part 2: Ribbed Bars
ISO 10065:1990	Steel bars for reinforcement of concrete -- Bend and rebend tests
ISO 10287:1992	Steel for the reinforcement of concrete – Determination of Strength of Joints in Welded Fabric
ISO 10544:1992	Cold-reduced steel wire for the reinforcement of concrete and the manufacture of welded fabric
ISO 11082:1992	Certification Scheme for welded fabric for the reinforcement of concrete structures
ISO 15630-1:2019	Steel for the reinforcement and pre-stressing of concrete – Test Methods – Part 1: Reinforcing bars, wire rods and wires
ISO 15630-2:2019	Steel for the reinforcement and pre-stressing of concrete – Test Methods – Part 2: Welded
ISO 15630-3:2019	Steel for the reinforcement and pre-stressing of concrete – Test Methods – Part 3: Pre-stressing Steel

All the four grades of steel with specified characteristic value of yield strength of 500MPa selected in this PBD standard should conform to all the requirements of ISO 6935-3:1992.

The commonly available grade used in Brunei Darussalam is B500BWR.

Some of the figures and references stated in this PBD 2:2022 are reproduced from the above-mentioned related ISO standards with copyright permission from ISO.

Acknowledgement is made to the ISO for the use of some of the materials extracted from the above-mentioned standards for this publication.

1 Scope

This part of PBD 2:2022 specifies technical requirements for factory made sheets or rolls of welded fabric, manufactured from steel wires or bars with diameters from 4 mm to 16 mm and designed for the reinforcement of concrete structures and the ordinary reinforcement of prestressed concrete structures.

For the purpose of this part of PBD 2:2022 the term "wire" also includes bars.

2 Definitions

For the purposes of this part of PBD 2:2022, the following definitions apply:

2.1. test unit: The number of pieces or the tonnage of products to be accepted or rejected together, on the basis of the tests to be carried out on sample products in accordance with the requirements of the product standard or order. [ISO 404]

2.2. certification scheme: Certification system as related to specified products, processes or services to which the same particular standards and rules, and the same procedure, apply.

2.3. characteristic value: Value having a prescribed probability of not being attained in a hypothetical unlimited test series. [ISO 8930]

NOTE 1 Equivalent to fractile, which is defined in ISO 3534

2.4. fabric: A geometrical arrangement of longitudinal and transverse wires that are arranged substantially at right angles to each other and welded together at all points of intersection.

2.5. inspection: Activities such as measuring, examining, testing, gauging one or more characteristics of a product or service and comparing these with specified requirements to determine conformity.

2.6. length of fabric: The longest side of the fabric, irrespective of the manufacturing direction.

2.7. longitudinal wire: Wire in the manufacturing direction of the fabric.