

2009 EDITION



Peraturan Pemeringkatan Kayu Keras Gergaji Malaysia

Edisi 2009

## **FOREWORD**

Since the year 1933, all Malayan timber exported to the United Kingdom and other selective markets has been graded under the Empire Grading Rules. These Rules were designed for general application and, therefore, not particularly adapted to meet Malayan conditions, yet, nevertheless, they proved of real value during the earlier developments in the export of graded Malayan timbers and contributed substantially towards the establishment of this trade on a sound basis.

With the increasing knowledge gained of our timbers and local standards of production on the one hand, and overseas market requirements on the other, it had for some time past become increasingly evident that these Rules no longer entirely met our requirements. However, the Sub-Committee of the Imperial Institute's Advisory Committee on Timbers, which had drawn up the original Empire Grading Rules, no longer existed and, consequently, there was no machinery for effecting amendments. The alternative course of drawing up rules to cover our own requirements was, therefore, adopted and in November 1948, these were widely circulated in draft form to sawmillers, shippers, importers, and in fact to all sections of the trade for criticism. This appeal for suggestions and corrections met with ready response and this evidence of helpful interest in the undertaking was most encouraging. Many alterations and amendments in the original draft Rules have been made in the light of the numerous comments and constructive criticisms received.

The preparation and compilation of these Rules has been largely the work of Mr. C. O. Flemmich, Forest Officer, Singapore, with the assistance during both the preliminary and final drafting stages of a small Committee comprising officers with first-hand knowledge of timber grading and export, Together with the draft final Rules, this Committee included two short notes. As these indicate the guiding principles followed in the compilation of these Rules, it is appropriate that they should be quoted in this foreword:

(i) "The end or ultimate use of timber should determine the kind, grade and dimensions, and it is recognized that dealings in timber, as in any other commodity, must primarily be a matter of arrangement between buyer and seller. These rules are designed to assist such arrangements. In this connection it must be emphasized that at present, and for some time to come, Malayan producers cannot normally undertake the cutting of Prime grades only. If the present volume of exports is to be maintained, and increased, it is essential that buyers should agree to take a reasonable proportion of the lower grades.

(ii) It must be remembered that wood is a natural product and, therefore, however carefully a log may be sawn, it will yield little or no timber entirely free from defects. The purpose of grading rules is to limit the number of such unavoidable defects, according to the purpose for which the timber is required, and such rules must be framed to suit the type of defects commonly found in the timbers to which they will be applied."

Rules are provided in Part II for the grading of timber to be resawn for general purpose uses, and in Part III are others covering such specialized uses as wagon planks, telegraph cross-arms, flooring and sleepers. It is to be expected that further uses for Malayan timbers will develop in time, calling for further specific rules. Any information, or suggestions, about such developments will be welcomed so that an appropriate section can be included in the next revision of these Rules. Any correspondence about this, or any other point connected with these Rules, should be addressed to the Forest Department, Swettenham Road, Kuala Lumpur, Malaya.

T. A. STRONG
Director of Forestry.
Federation of Malaya

Kuala Lumpur, July 1949

## PREFACE TO 2009 EDITION

The Malaysian Grading Rules for Sawn Hardwood Timber (MGR), have played a crucial role in raising the profile of the Malaysian timber industry as a supplier of quality timber. It needs no introduction as it is well known and recognised by the international market. Timber traders in the domestic market and the international level use the MGR as the basis for contract negotiations on the standard and quality requirement of timber.

The history of MGR began in 1933, with the flourishing of timber trade from the then Malaya. It was called the Empire Grading Rules. Subsequently the Empire Grading Rules evolved to become the Malayan Grading Rules and eventually to what is today known as the Malaysian Grading Rules for Sawn Hardwood Timber (MGR). These revisions to the contents of the MGR were made in a series of years commencing from 1949. Later revisions were made in the 1955, 1960 and 1968. The last revision was made in 1984.

The world timber market never had remained stagnant in terms of its demand for quality and innovative timber products. The market had to adapt to the increasingly sophisticated demands and requirements of the end users of timber and timber products. The timber industry itself had made enormous strides in the research and development sector and has produced innovative engineered timber products that has enhanced strength and durability and added aesthetic properties.

In keeping pace with the rapidly changing timber industry and timber market, the MGR needs to be regularly reviewed and updated. This would ensure that the grading rules remained relevant in the contemporary market scenario, and demands. It is with this view that Malaysian Timber Industry Board (MTIB) undertook the revision of the 1984 edition of MGR. In addition, the position of MTIB as well as that of Sarawak Timber Industry Development Corporation (STIDC) as authorities responsible for supervision of grading functions has been clearly defined.

In the process of the revision exercise, it was decided that the MGR should just be purely a document on grading rules. Hence, rules that were advisory and administrative in nature have been removed from the revised version and shall be issued, if necessary, in appropriate guidelines or circulars.

The significant amendments made to this edition are as follows:-

- In line with making this a purely grading document the Rules 9,10,11,12,13,14,18,19 and 20 have been removed.
- The Section on Railway Sleepers Specification has been divided into two subsections, namely Sub-section E1 – Sleepers; and Sub-section E2 – Crossings; and the contents have been re-phrased for better comprehension

- The term Large Scantlings and Squares has been renamed as Baulks and the grading requirements for this Section has been restructured and rephrased.
- A new Section, for the grading of Door and Window Frames has been added to reflect the growing demand for these products particularly from the European market.
- The Section on Prime Wides and Panels Specification has been removed since this Specification has never been employed and is unlikely to be ever used.
- The Section on Stress Grading has been removed since a Malaysian Standard i.e. MS 1714: 2003 – "Specification for Visual Strength Grading of Tropical Hardwood Timber" has been developed and contains provisions for stress grading of sawn timber.
- The listing of importing countries as 'Specified' and 'Unspecified' has been removed to reflect Malaysia's intention to export quality timber to all countries.
- Two additional timbers have been included to the list of commercial timbers namely, Acacia and Pelawan
- The Grade Mark has been changed from FTD (a reference to Forestry Department) to MTIB.

(To assist the users on the amendments made to the 1984 edition, a supplementary explanatory note is attached as an Annex to this Edition).

It is my fervent hope that with this updating, the MGR would further strengthen Malaysia's position as a reliable supplier of high quality graded sawn timber.

I also wish to take this opportunity to express my gratitude and appreciation to all members of the Technical Review Committee as well as the Drafting Committee for their invaluable contribution and untiring efforts in the review of this document.

Mohd Kheiruddin Mohd Rani

Director General Malaysian Timber Industry Board

Kuala Lumpur, February 2020

## CONTENTS

## PART I. GENERAL INFORMATION ON THE TIMBERS AVAILABLE AND ON THE RULES; INSTRUCTIONS REGARDING MANUFACTURE, DIMENSIONS AND MEASUREMENT; AND METHOD OF DETERMINATION OF GRADES

							Page
Section							35
A	General Information on the Rules				3000	100	1
8	General Information on the Timbers available					414	3
C	Instructions regarding Manufacture, Dimensions and Measurement						5
D	Method of Determination of Grades						9
	PA	RT II. GEN	ERAL MAI	RKET SPECIF	ICATIONS		
A	Rules defining the	Grades		522	100		16
В	The grading of timb		ning scatt	ered Pin Ho	les, Include		
	Phloem or Latex or						19
C	The Grouping of G		411			1000	21
D	Better Face Gradin		40.40		***	***	22
E	Bare or Scant Sawi		***				22
F	Dressed Timber		***	. 110			23
G	Impregnated Timb	er				- 100	23
Н	Kiln Dried Timber						23
		PART III. SE	PECIAL MA	ARKET SPEC:	IFICATIONS		
Α	Door and Window	Frames	444	111			24
В	Strips (including Stri			346	****	C+44	26
C	Shorts [including Bl						29
D	Scantlings		84				31
E	Railway Sleopers (Ties) and Crossings					150	33
F	Wagon Planks			***	***	101	40
G	Cross Arms		944		111	200	42
н	Develop	***	A400	1444	***	7.00	44
1	Describes	440	***		(***	+440	45
100	BOURS		3330	12.00	355	0.775	43
		PA	RTIV. AF	PENDICES			
Append							
1	Classification And	Density Rar	nge of \$0	me Malaysi	an Timbers	111	47
11	Schedule of Minim	um Season	ing Period	ds	(844)	100	81
111	Marking of Grades	Timber	944				83
IV	Tally Book		222			***	85
V	Sample of Grading	Summary		111	111	100	86
VI	Table Of Sawing Si		444				87
VII	Definitions Of Defe						
- 200	In The Sawn Timber				TERES.	1400	88
VIII	Conversion Table			121	+++		100
IX	Grading Table		57%	""			101
100	Cradinia Ideno	5.60	9.94	1111	111	200	101