



MALAYSIAN GRADING RULES

Rationale behind the Malaysian Grading Rules

The Malaysian Grading Rules (MGR) was conceived to ensure quality to buyers of Malaysian timbers. The most important aspect of the MGR is that it deals with the quality of appearance of the sawn timber. The major part of the rules concern the quality of cut (“the Cutting System”) and the amount of cutting defects that are allowed in each grade (“the Defect System”). The rules were designed to eliminate defects due to production and limit the amount of natural defects allowed under each grade.

Under the Cutting System, the higher grades are accorded to sawn timber pieces that yield a higher percentage of defect-free cuttings. This system is used for grading timbers that are usually re-sawn into smaller dimensions during applications. As most Malaysian timbers are imported for further processing, this system is the most commonly used method for grading Malaysian timbers. In this system, the percentage of good clean cut surface that can be obtained from a piece of timber will determine the grade of the timber.

Under the Defect System, it is recognized that several natural defects cannot be eliminated through technology. The MGR allows for the inclusion of these natural defects wherever they do not interfere with the final utilization and integrity of the timbers. This system is used to grade timbers that are destined to be used for specific purposes and are intended to be used in the sizes in which they are supplied. Examples of timber graded under this system are railway sleepers and cross arms.

The number of defects determines the grade assigned to the sawntimber. Defects that are normally deemed permissible include sound knots, phloem and pin holes. Since these defects occur naturally, special dispensations have been included in the rules to cater for them. As such, there are provisions in the Rules for buyers to pur-

chase timbers under a PHND (Pin Holes No Defect) or IPND (Included Phloem No Defect) or SKND (Sound Knots No Defect) specification. Under such circumstances, the grades will be specially marked as PHND or IPND, *etc.*

Specifying Timbers Under the Malaysian Grading Rules

Depending on the purpose for which the timbers are purchased, buyers who wish to buy graded timbers from Malaysia have a choice of having their timber graded under the General Market Specification or the Special Market Specification.

General Market Specification is reserved for timbers, *e.g.*, boards and planks, that are usually re-sawn before use and the timbers are graded under the Cutting System. For this reason, the presence of good, clean-cut surfaces are important and the grades are determined according to the percentage of clear faces that can be obtained from the piece of timber.

Special Market Specification deals with timbers for specific purposes and the final sizes are usually specified, *e.g.*, railway sleepers and cross arms. Table 1 illustrates the two methods of specification and the systems that can be used to grade timbers for various purposes.

TABLE 1 – TYPES OF SPECIFICATION AND SYSTEMS USED

Specification	System Used	Grades Available
General Market Specification (i) Boards/Planks	Cutting System	(i) Prime (ii) Select (iii) Standard (iv) Sound (v) Serviceable (vi) Utility

Special Market Specification:

i) Prime Wides and Panels	Cutting System	(i) Prime
(ii) Strips	Cutting System	(i) Prime (ii) Select (iii) Standard (iv) Sound (v) Serviceable (vi) Utility
(iii) Scantlings	Defect System	(i) Select & Better (ii) Standard (iii) Sound (iv) Serviceable (v) Utility
(iv) Sleepers	Defect System	(i) Select & Better (ii) Standard & Better

(v) Shorts	Defect System	(i) Prime (ii) Select (iii) Standard (iv) Sound (v) Serviceable
(vi) Cross Arms	Defect System	(i) Select & Better (ii) Standard & Better
(vii) Wagon Planks	Defect System	(i) Wagon Plank
(viii) Large Scantlings & Squares	Defect System	(i) Large Scantling & Squares
(viii) Decks	Defect System	(i) Decks

AREA OF SPECIAL INTEREST

There are areas that will be of special interest to buyers of graded Malaysian timbers:

1. Rules dealing with size tolerance

Timbers tend to shrink upon drying. To allow for this expected shrinkage, the MGR recommends that timbers be sawn oversized, with an allowance to compensate for this shrinkage. Timbers sawn with such an allowance for shrinkage are described as full sawn. However, full sawn timbers are more expensive as the cost of the extra material supplied will eventually be borne by the buyers. In cases where the final size of the piece of timber is not critical to its utilization, *e.g.*, when the timber is re-sawn before usage, the buyers can specify that the timber need not be full sawn. This is to save costs. In these cases, the buyers can specify that the timber be sawn to its exact dimension, or bare sawn. This cost-saving measure can be taken further by specifying that the timber be sawn to a dimension slightly less than specified, *i.e.*, scant sawn. Whether the timber is purchased as full, bare or scant sawn, it is very much a matter of buyer-seller contractual agreement. Under specifications for bare or scant sawn timbers, all documents will have to bear the correct specifications and all grades will be marked with the words “bare” or “scant”. In the absence of such a prior contractual agreement, all timbers are presumed to be full sawn timbers.

1. Rules for grading kiln-dried timber

Timber to be kiln-dried will be graded before kiln-drying. Timbers are to be sawn with recommended oversize and provisions for scant sawn do not apply. Defects developed during the kiln-drying process will be the responsibility of the kiln operator, who shall reject all defective pieces. The kiln operator will issue a kiln-drying certificate, which will be endorsed by the Grading Authority with the statement “timber kiln-dried after grading”. No kiln-dried timber can be exported with-

out this endorsement, which proves that the timbers were graded and inspected prior to kiln-drying.

1. Rules for grading of impregnated timber

Grading is normally done before impregnation, unless otherwise specified. This means that any defective pieces would have been removed prior to treatment. It must be noted that grading is done solely to ensure the quality of the piece of timber and not the impregnation process. For that assurance, an accompanying “Impregnation Certificate” will have to be issued by the company treating the timber, and the certificate will have to be endorsed by the Grading Authority.

1. Reading the Grade Marks

All timbers graded under the MGR are marked with Grade Marks consisting of an arrow with the letters F and D (denoting the Forestry Department, the historical Grading Authority), on either side. Underneath the arrow is the abbreviation for the appropriate grade (e.g., prime, select, standard, sound, utility *etc.*). Additional markings are found on the side if appropriate, e.g., PHND.

Some grades are marked as “& UP”. This means that the grade has a minimum rating of the grade and may contain pieces that are of a higher grade. Example, if the grade is “Select & Better”, it means that the worst piece of the parcel is of the “Select” grade but the parcel may contain pieces that are of a better grade.

Grading and Inspecting Process

Timber is graded by fully trained and licensed Timber Graders, who are private operators. If required, a check grading can be done by Timber Inspectors of the Malaysian Timber Industry Board, the designated Grading Authority in Malaysia.

Check grading is not compulsory and it is done only upon request. The Timber Inspectors will conduct a 10% check grading on the consignment to ascertain that the grading has been done accurately.

Timbers will be graded in accordance to the grade specified for the consignment. For instance, if the buyer wishes to buy Select & Better sawntimber, then the Timber Graders will be looking at the consignment to see whether it will qualify for this grade. Grading is also guided by the buyers' specifications on which system of grading to use, *e.g.*, Cutting System or the Defects System. Then the timbers are examined piece by piece to ascertain the percentage of clean surfaces that can be obtained from the consignment. If the percentage of good clean surface is adequate for that particular grade, then the consignment is deemed to represent that grade. It must be noted that the underlying principle of grading as done under the Malaysian Grading Rules is that it is the amount of good clean surfaces that decide the grade, and *not* the amount of defects present. In other words, when you order timbers graded under the MGR, you are guaranteed a certain amount of good timber, and not how much defective timbers were kept out.