

JIS

JAPANESE INDUSTRIAL STANDARD

Reamers--Vocabulary

JIS B 0173-1991

Translation without guarantee
In the event of any doubt arising, the original
standard in Japanese is to be evidence

Translated

by

Japanese Standards Association

1-24, Akasaka 4, Minato-ku
Tokyo 107 Japan

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1. Scope

This Japanese Industrial Standard specifies terms and definitions relating to reamers⁽¹⁾ to be used generally as metal cutting mainly.

Note (¹) Tools to be used in the case where the preliminarily drilled hole is to be finished correctly and at the same time the smooth finished surface is to be obtained.

Remarks 1. Applicable Standards to this Standard are shown in the following.

JIS B 0170-Glossary of Common Terms for Cutting Tools

JIS B 4231-Countersinks

JIS B 4401-Reamers for Morse Tapers

JIS B 4402-Chucking Reamers with Straight Shanks

JIS B 4403-Chucking Reamers with Taper Shanks

JIS B 4405-Hand Reamers

JIS B 4406-Shell Reamers

JIS B 4407-Straight Shank Arbors for Shell Reamers

JIS B 4408-Taper Shank Arbors for Shell Reamers

JIS B 4409-Machine Bridge Reamers

JIS B 4410-Machine Taper Pin Reamers

JIS B 4411-Hand Taper Pin Reamers

JIS B 4412-Adjustable Reamers

JIS B 4413-Machine Reamers

2. The corresponding International Standard is shown in the following.

ISO 5420-1983 Reamers-Terms, definitions and types.
Bilingual edition

2. Classification

Terms shall be classified as follows.

(1) Classification of reamers

(a) Classification according to cutting part material and surface treatment

(b) Classification according to structure

(c) Classification according to attaching method

(d) Classification according to function or use

- (2) Reamer elements
- (3) Reamer angles
- (4) Reamer accuracy
- (5) Reamer cutting part ruptures and breakages
- (6) Reamer general

3. Name of reamer

The name of reamer to express the classification shall be the combination of corresponding terms in the order of classification of reamers [(1) of 2.].

Further, for the reamer made of high speed tool steel as the cutting part material, and solid⁽²⁾, welded, straight tooth reamers are called with abbreviated with those (the term in () in the following Example).

Further, in the case where it is possible to discriminate only by function or use, the attaching method may be abbreviated.

Note (2) In the case where the cutting part material is other than high speed tool steel, the solid may be abbreviated.

Example:

Name	Cutting part material and surface treatment	Structure	Attaching method	Function or use
Hand reamer	(High speed tool steel)	(Solid)	(Cylindrical parallel shank)	Hand reamer
Carbide brazed chucking reamer with taper shank	Carbide	Brazing	Taper shank	Chucking reamer
Coating machine reamer	Coating (high speed tool steel)	(Solid)	(Taper shank)	Machine reamer

4. Terms and definitions

Terms and definitions shall be as follows.

Further, for informative reference, the quantity symbol, unit and corresponding English are shown.

- Remarks
1. For a part of term shown in (), the letters shown in () may be abbreviated.
 2. The term indicated by bold letters in the definition of term, indicates that specified in this Standard.

(1) Classification of reamers

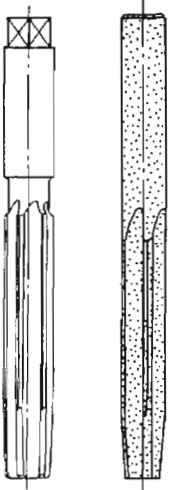
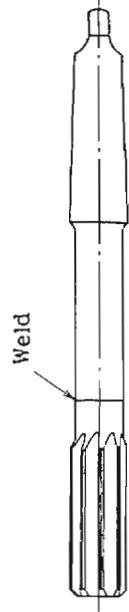
(a) Classification according to cutting part material and surface treatment

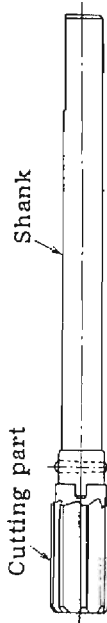
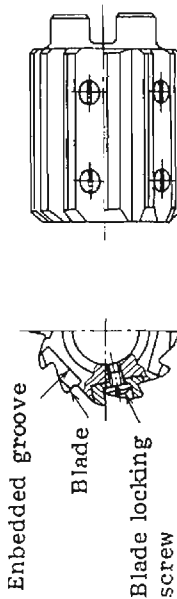
No.	Terms (Japanese character)	Reading	Definition	Informative reference	
				English equivalent	
1101	合金工具鋼リ-マ	GŌKIN KŌGUKŌ RĪMA	The reamer used of alloy tool steel for material of cutting part.	alloy tool steel reamer	
1102	高速度(工具)鋼リ-マ	KŌSOKUDO (KŌGU)KŌ RĪMA	The reamer used of high speed tool steel for material of cutting part.	high speed (tool) steel reamer	
1103	超硬質工具材料リ-マ	TYŌKŌSITU KŌGU ZAIRYŌ RĪMA	Generic name of reamers used of carbide tool material (carbide alloy, cermet, ceramic, boron nitride sintered compact, diamond, diamond sintered compact, etc.) for cutting part material. Remarks: There is the carbide reamer, cermet reamer, ceramic reamer, BN reamer (boron nitride reamer), diamond reamer, etc.	hard tool material reamer	
1104	超硬(合金)リ-マ	TYŌKŌ (GŌKIN) RĪMA	The reamer made of carbide alloy (the sintered compact of tungsten carbide as main body) for material of cutting part.	carbide reamer, cemented carbide reamer, hardmetal reamer	
1105	サ-メットリ-マ	SĀMETTO RĪMA	The reamer made of cermet (the sintered compact of main body of titanium compound) for material of cutting part.	cermet reamer	

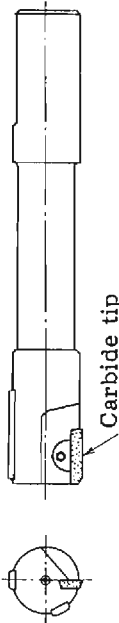
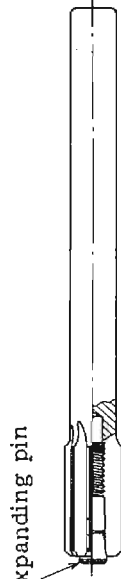
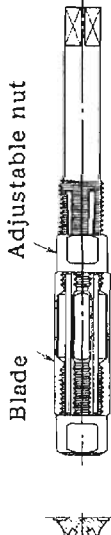


No.	Term (Japanese character)	Reading	Definition	Informative reference	
				English equivalent	
1106	表面処理リーマ	HYŌMEN SYORI RĪMA	The reamer applied with surface treatment such as nitriding, oxidizing, nitriding-oxidizing treatment, etc. to the material of cutting part.	surface-treated reamer	
1107	コーティングリーマ	KŌTINGU RĪMA	The reamer having used the tool material adhered tightly with a layer or many layers chemically or physically with carbide nitride, oxide, etc. as the material of cutting part. It is also called the coated reamer. Remarks: According to the kind of tool material to be coated, there are the coated high speed tool steel reamer, coated carbide reamer, etc. According to the kind of coating material, there are TiN coating, TiC coating, TiCN coating, Al₂O₃ coating, BN coating, diamond coating, etc.	coated reamer	

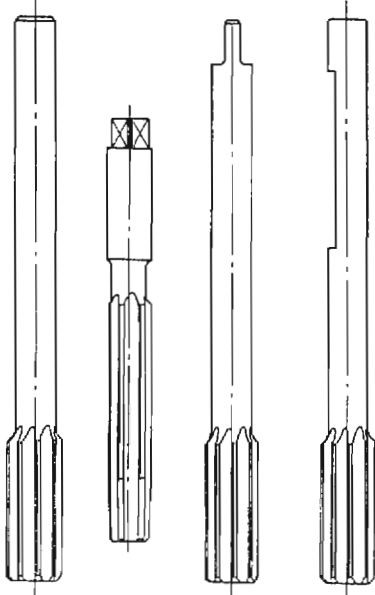
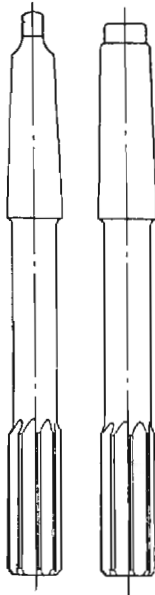
(b) Classification according to structure

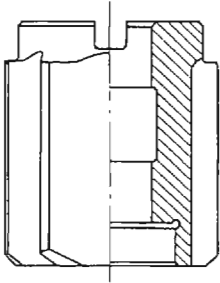
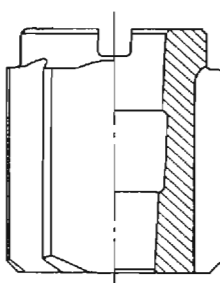
No.	Terms (Japanese character)	Reading	Definition	Informative reference	
				English equivalent	
1201	むくりマ	MUKU RĪMA	The reamer of which Cutting part and Body or Shank are made of the same material. It is also called solid reamer. 	solid reamer	
1202	溶接リマ	YŌSETU RĪMA	The reamer of which Body and Shank are welded. 	welded reamer	
1203	ろう付けリマ	RŌTUKU RĪMA	The reamer of which Cutting part material is brazed to Body. 	brazed reamer	

No.	Terms (Japanese character)	Reading	Definition	Informative reference	
				English equivalent	
1204	先むくりーマ	SAKIMUKU RĪMA	The reamer of which only the part from the top end of Cutting part until a certain length is made of solid tool material. 	top solid reamer	
1205	組立てりーマ	KUMITATE RĪMA	The reamer of structure assembled with Cutting part, Body or Shank. 	constructed reamer	
1206	植刃りーマ (うえばーマ)	UEBA RĪMA	The reamer attached mechanically with Blade to Body. 	inserted reamer	

No.	Terms (Japanese character)	Reading	Definition	Informative reference	
				English equivalent	
1207	差込みリーマ サシコミリーマ	SASIKOMI RĪMA	The reamer of which Body is inserted in Shank and fixed by hazing or other method.  Carbide tool material	inserted reamer	
1208	スロアウェイリーマ スロアウェイリーマ	SURŌ AWEI RĪMA	The reamer of which the Body is fastened mechanically with a Throw-away tip.  Carbide tip	throw-away reamer	
1209	調整リーマ テヨセイリーマ	TYŌSEI RĪMA	The reamer of which Diameter can be regulated.  Expanding pin  Blade Adjustable nut	adjustable reamer, expansion reamer	

(c) Classification according to attaching method

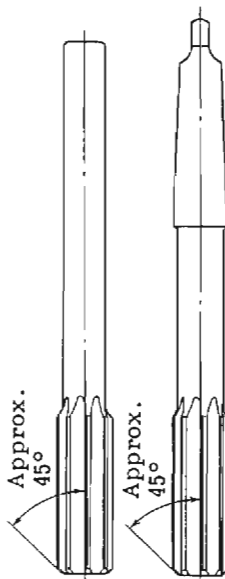
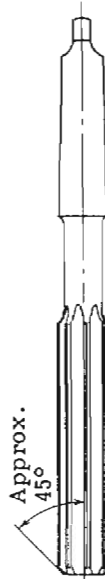
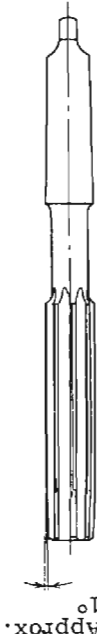
No.	Terms (Japanese character)	Reading	Definition	Informative reference English equivalent
1301	ストレートシャンク リ-マ ー	SUTORETO SYANKU RĪMA	Generic name of shank type reamers having straight shank. Remarks: There are plain straight shank, squared straight shank, tanged straight shank and flatted straight shank. 	parallel shank reamer, straight shank reamer
1302	テーパシャンクリ-マ ー	TĒPA SYANKU RĪMA	Generic name of Reamers having taper shank. Remarks: There are tanged taper shank reamer and threaded taper shank. 	taper shank reamer

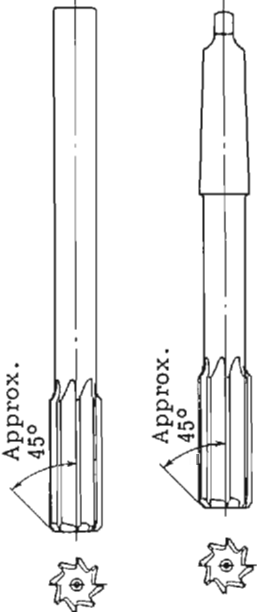
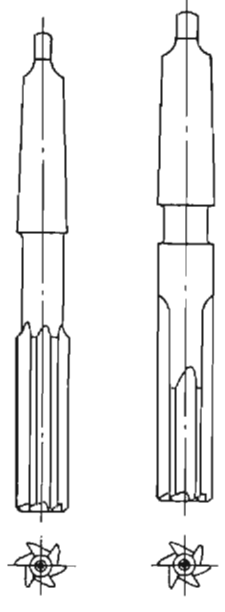
No.	Terms (Japanese character)	Reading	Definition	Informative reference	
				English equivalent	
1303	ブレインボアリーマ	PUREIN BOA RĪMA	The bore type reamer having a straight bore. 	parallel bore reamer	
1304	テーパボアリーマ	TĒPA BOA RĪMA	The bore type reamer having a taper bore. 	taper bore reamer	

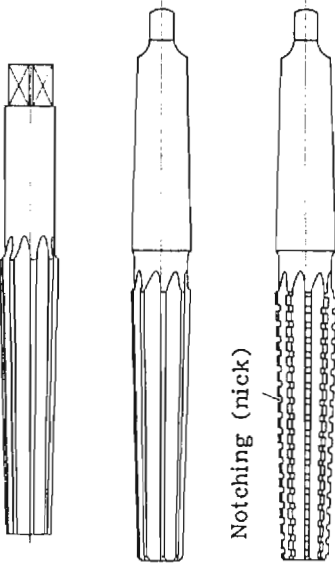
(d) Classification according to function or use

No.	Terms (Japanese character)	Reading	Definition	Informative reference	
				English equivalent	
1401	手回し作業用リーマ	TEMAWASI SAGYŌYŌ RĪMA	Generic name of reamers having Square portion of shank to work by hand working by using a hand-turning handle.	hand-working reamer	
1402	機械作業用リーマ	KIKAI SAGYŌYŌ RĪMA	Generic name of reamers having the Shank for attaching and to perform machine finishing by using each type of machine tool and electric motor. There is the flute type of which Land has Margin and clearance angle and the rose type of which Land whole surface is made Margin by expanding the groove of heading part.	machine-working reamer	
1403	ハンドリリーマ	HANDO RĪMA	The hand-working reamer having the chamfer angle of approximately 1° for finishing use. In the case of a hole having flute or the like, the helical tooth is used. Refer to JIS B 4405.	hand reamer	

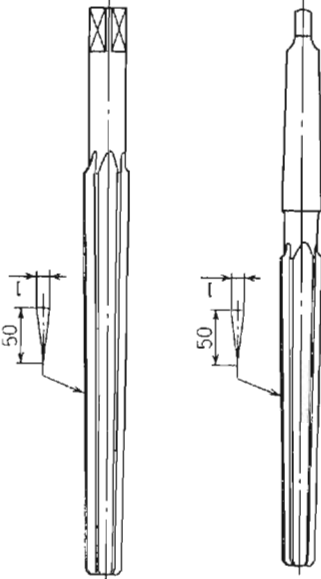
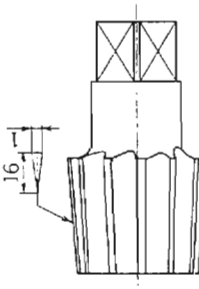


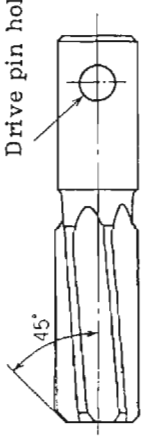
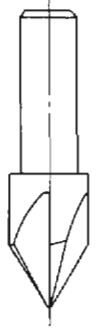
No.	Terms (Japanese character)	Reading	Definition	Informative reference English equivalent
1404	チャッキングリマ	TYAKKINGU RĪMA	The machine working reamer having a short cutting edge length and chamfer angle of approximately 45°. Refer to JIS B 4402 and JIS B 4403. 	chucking reamer, straight shank chucking reamer, taper shank chucking reamer
1405	マシンリマ	MASIN RĪMA	The machine working reamer in which the cutting edge length of Chucking reamer with taper shank is made long. The chamfer angle is approximately 45° (Refer to JIS B 4413). 	machine reamer, long fluted machine reamer
1406	ジョバースリマ	ZYOBĀSU RĪMA	The Taper shank reamer having chamfer angle of approximately 1°. 	jobber's reamer

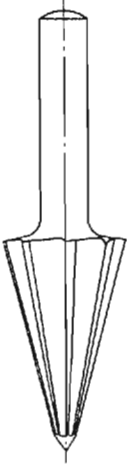
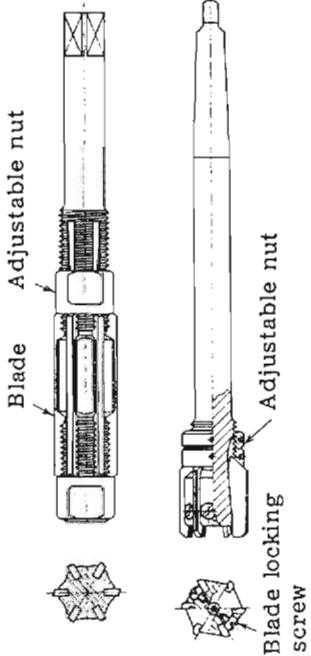
No.	Terms (Japanese character)	Reading	Definition	Informative reference English equivalent
1407	ローズリーマ ロ-ズリ-マ	RÔZU RĪMA	The rose type reamer having chamfer angle of approximately 45°. According to the shape of Shank, there is the parallel shank rose reamer and taper shank rose reamer. 	rose reamer, straight shank rose reamer, taper shank rose reamer
1408	底刃付きリーマ (そこはつきー)	SOKOHA TUKI RĪMA	The machine working reamer having and cutting for simultaneous working of bottom seat. Generally it has no chamfer. It is called also jig borer reamer. 	end cutting reamer, end facing reamer

No.	Terms (Japanese character)	Reading	Definition	Informative reference English equivalent
1409	ブリッジリナー	BURIZZI RĪMA	The reamer to be used when correcting the dislocation of rivet hole and bolt hole (Refer to JIS B 4409). 	bridge reamer, machine bridge reamer
1410	テーパバリナー	TĒPA RĪMA	The reamer to be used for finishing of taper inserting bore. There are hand-working reamers and machine-working reamers. For that of rough finishing, the cutting edge is attached with nicks.  Notching (nick)	taper reamer

No.	Terms (Japanese character)	Reading	Definition	Informative reference	
				English equivalent	
1411	モースターパー マ	MŌRUSU TĒPA RĪMA	The taper reamer to be used for finishing of morse taper bore. There are hand-working reamer and machine working reamer. For that of rough finishing, the cutting edge is attached with nicks (Refer to JIS B 4401).  Morse taper  Morse taper  Notching (nick)	morse taper reamer	

No.	Terms (Japanese character)	Reading	Definition	Informative reference English equivalent
1412	テーパピンリ-マ	TĒPA PIN RĪMA	The taper reamer to finish the inserting bore of taper pin. The diameter is measured at nearly minor diameter end and the taper is to be 1/50 (Refer to JIS B 4411 and JIS B 4410). 	taper pin reamer
1413	パイプリ-マ	PAIPU RĪMA	The reamer to be used for finishing of taper of bore of pipe joint. The taper is 1/16. 	taper pipe reamer

No.	Terms (Japanese character)	Reading	Definition	Informative reference English equivalent
1414	スタブリーマ	SUTABU RĪMA	The reamer of short cutting edge length and overall length, to be used mainly in an automatic lath. That of chamfer angle of 45°, right hand teeth, left hand helical tooth is usual and the Shank has the drive pin hole. 	stub screw machine reamer
1415	センターリーマ	SENTA RĪMA	The reamer to be used for finishing of Center hole or chamfer working. Generally the circular cone angles are 60° and 75° but there are those of 90° and 120° also. It is also called Chamfering milling cutter (Refer to JIS B 4231). 	center reamer

No.	Terms (Japanese character)	Reading	Definition	Informative reference	
				English equivalent	
1416	バーリングリマ	BĀRINGU RĪMA	The reamer to be used for removing the burrs of cutting opening of pipes. 	burring reamer	
1417	アジャスタブルリマ	AZYASUTABURU RĪMA	The reamer to adjust the Diameter by travelling the Blade fit in Groove of blade. There is the hand-working reamer and machine working reamer (Refer to JIS B 4412). 	adjustable reamer	