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JAPANESE INDUSTRIAL STANDARD

Glossary of terms-Relating
to industrial combustion
equipments

JIS B 0113-1989

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JAPANESE INDUSTRIAL STANDARD

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Glossary of Terms - Relating to Industrial
Combustion Equipments

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1. Scope

This Japanese Industrial Standard specifies glossary of terms relating to industrial combustion equipment using liquid and gas fuels.

2. Classification

Terms shall be classified as follows:

- (1) Classes and Types
- (2) Structure
- (3) Accessary Facilities
- (4) Combustion General
- (5) Performance and Tests

3. Terms and Definitions

Terms and definitions shall be as follows:

Further, for informative reference English equivalent is shown.

- Remarks 1. Writing in Japanese syllabary (KANA) in parentheses under the term indicates the reading.
2. In this glossary the units and numerical values shown in { } are traditional units and are appended for informative reference.

(1) Classes and Types

No.	Term (Japanese character)	Reading	Definition	Informative reference	
				Idiom	English equivalent
101	バーナ	BĀNA	A device and equipment to burn the fuel.		burner
102	油バーナ	ABURA BĀNA	Generic term of burner to burn the liquid fuel.		oil burner
103	ガスバーナ	GASU BĀNA	Generic term of burner to burn the gas fuel.		gas burner
104	油圧式油バーナ	YUATU-SIKI ABURA BĀNA	An oil burner of type to jet oil only by oil pressure energy.	ATURYOKU- HUNSYASIKI BĀNA, MEKANIKARU BĀNA	pressure jet type oil burner, mechanical atomizing oil burner
105	戻り油形油圧式油バーナ	MODORIYU-GATA YUATU-SIKI ABURA BĀNA	A pressure jet type oil burner capable of returning the oil fed to the burner body.	RITĀN-GATA OIRU-BĀNA	wide range type oil burner, oil return type oil burner
106	非戻り油形油圧式油バーナ	HI-MODORIYU- GATA YUATU- SIKI ABURA BĀNA	A pressure jet type oil burner not capable of returning the oil fed to the burner body.	SUTORĒTO- GATA OIRU- BĀNA, NONRITĀN- GATA OIRU- BĀNA	straight type oil burner, non-return type oil burner

No.	Term (Japanese character)	Reading	Definition	Informative reference	
				Idiom	English equivalent
107	低圧空気式油バーナ	TEĀTU-KŪKI-SIKI BĀNA	An oil burner of type to carry out atomizing of oil by air at comparatively low pressure [generally 20 kPa {0.2 kgf/cm ² } or less].	TEIATU BĀNA	low pressure air atomizing oil burner, low pressure air jet type oil burner
108	運動形低圧空気式油バーナ	RENDŌGATA TEĀTU-KŪKI-SIKI ABURA BĀNA	A low pressure air atomizing oil burner of which regulator of oil and air amounts is capable of sequential operation.	TEIATU WANREBĀ-GATA OIRU-BĀNA	proportioning single lever type oil burner
109	非運動形低圧空気式油バーナ	HI-RENDŌGATA TEĀTU-KŪKI-SIKI ABURA BĀNA	A low pressure air atomizing oil burner of which regulator of oil and air amounts is not capable of sequential operation.	TEIATU-SYUDŌGATA OIRU-BĀNA	individual control type oil burner
110	高圧気流式油バーナ	KŌATU-KIRYŪ-SIKI ABURA BĀNA	An oil burner of type to carry out atomizing of oil by using air or steam of comparatively high pressure [generally 100 kPa {1 kgf/cm ² } or more].	KŌATU BĀNA	steam or air jet type oil burner, steam or air atomizing oil burner
111	内部混合形高圧気流式油バーナ	NAIBU-KONGŌ-GATA KŌATU-KIRYŪ-SIKI ABURA BĀNA	A steam or air jet type oil burner of type to atomize after mixing oil and air or steam in an internal part of burner.	NAIBU-KONKI-SIKI OIRU-BĀNA	intermixing type oil burner

No.	Term (Japanese character)	Reading	Definition	Informative reference	
				Idiom	English equivalent
112	外部混合形高圧気流式油バーナ	GAIBU-KONGŌ- GATA KŌATU- KIRYŪ-SIKI ABURA BĀNA	A steam or air jet type oil burner of type to atomize oil by air or steam at the outer part of burner.	GAIBU-KONGŌ GATA OIRU- BĀNA	injector atomizer, steam or air jet type oil burner
113	回転式油バーナ	KAITENSIKI ABURA BĀNA	An oil burner of type to carry out atomizing of oil by atomizing cup at top end part of burner or centrifugal force and air flow by rotation of disk.	RŌTARI-BĀNA	rotary oil burner
114	横形回転式油バーナ	YOKOGATA KAITEN-SIKI ABURA BĀNA	A rotary atomizing oil burner of which rotary main shaft of burner is horizontal.		horizontal rotary oil burner
115	立形回転式油バーナ	TATEGATA KAITEN-SIKI ABURA BĀNA	A rotary atomizing oil burner of which main rotary shaft is vertical.	TATEGATA RŌTARI- BĀNA	vertical rotary oil burner
116	超音波バーナ	TYŌ-ONPA BĀNA	A burner of type to carry out oil atomizing by ultrasonic energy.	ONPA BĀNA	ultrasonic burner
117	蒸発式油バーナ	ZYŌHATU-SIKI ABURA BĀNA	An oil burner of type to carry out combustion by vaporizing oil in internal part of burner.	POTTO-TAIPU BĀNA, KIKASIKI BĀNA	vaporizing type oil burner
118	予混合式ガスバーナ	YO-KONGŌ- SIKI GASU BĀNA	A gas burner of type to carry out combustion by blowing out the mixture by mixing whole amount or a part of gas and air for combustion in internal part of burner or a separately provided mixing chamber.	MOTO-KONGŌ SIKI GASU- BĀNA, PUREMIKKUSU- GASU-BĀNA	premixing type gas burner

No.	Term (Japanese character)	Reading	Definition	Informative reference	
				Idiom	English equivalent
119	全予混合式ガスバーナ	ZEN-YO-KONGŌ- SIKI GASU BĀNA	A gas burner of type to carry out combustion by mixing in internal part the whole amount of gas and air for combustion.		premixing type gas burner
120	部分予混合式ガスバーナ	BUBUN-YO- KONGŌ-SIKI GASU BĀNA	A gas burner of type to carry out combustion by mixing in internal part a part of gas and air for combustion.	SEMI- PUREMIKKUSU- GASU-BĀNA	partial premixing type gas burner
121	外部混合式ガスバーナ	GAIBU-KONGŌ- SIKI GASU BĀNA	A gas burner of type to burn by contact mixing gas and air for combustion at the top end part of gas burner nozzle.	SAKI-KONGŌ GASU BĀNA, NOZURU- MIKKUSU-GATA GASU BĀNA	non-premix- ing type gas burner, nozzle mixing type gas burner
122	誘導混合式ガスバーナ	YŪDŌ-KONGŌ- SIKI GASU BĀNA	A gas burner of type to mix by inducing air or gas by injection of gas or air.	BENTYURI-SIKI GASU-BĀNA, INSUPIRĒTA- SIKI GASU- BĀNA	inspirator type gas burner, induced mix- ing type gas burner, injector type gas burner
123	強制混合式ガスバーナ	KYŌSEI- KONGŌ-SIKI GASU BĀNA	A gas burner of type to mix forcedly by pressurizing gas and air.	BURASUTO- BĀNA	forced mixing type gas burner



No.	Term (Japanese character)	Reading	Definition	Informative reference	
				Idiom	English equivalent
124	大気圧バーナ	TAIKI-ATU BĀNA	A premixing type gas burner to absorb a part of air for combustion by dynamic pressure of combustion gas from the atmosphere by means of a mixing tube or the like.	ATOMOSUHERI- KKU-BĀNA	atmospheric burner
125	そで火付バーナ	SODEBI-TUKI BĀNA	A premixing type gas burner arranged with many small-opening-diameter nozzles at the circumference of main nozzle.		flame retention burner, piloted gas burner
126	拡散炎形ガスバーナ	KAKUSAN'EN- GATA GASU BĀNA	A gas burner to burn with diffusion mixing the fuel and air.		diffusion type gas burner
127	エキセスエアガスバーナ	EKISU- GASU BĀNA	A gas burner having a structure capable of obtaining stabilized combustion even at the specially large amount of excess air.		excess air gas burner
128	バリエーションフレームバーナ	BARIABURU- HUREMU BĀNA	A non-premixing type gas burner capable of varying length of flame optionally.		variable flame burner
129	フラットフレームバーナ	HURATTO HUREMU BĀNA	A non-premixing type gas burner to generate a flat flame along the furnace wall.		flat flame burner
130	油・ガス混焼式バーナ	ABURA-GASU KONSŪ-SIKI BĀNA	A burner of type capable of burning oil and gas at the same time or in- dividually.	KONBINESYON- BĀNA	combination burner, combination oil and gas burner

No.	Term (Japanese character)	Reading	Definition	Informative reference	
				Idiom	English equivalent
131	油・ガス切換式バーナ	ABURA-GASU KIRIKAE-SIKI BANA	A burner of type capable of burning by changing-over oil or gas.	KIRIKAE- SENSYO-SIKI BANA	dual fuel burner
132	ガンタイプバーナ	GAN-TAIPU BANA	A burner having shape like a gun, assembled with a blower, ignitor, etc., and having cylindrical blowing tube and fuel injection opening at its top end.	GAN-TAIPU	gun type burner
133	放射バーナ	HŌSYA BĀNA	A burner having main purpose to heat the attached tiles and other refractories by burning fuels and to utilize its radiation for trans- mission of heat.	HUKUSYA BĀNA, SEKIGAISEN BĀNA	radiant burner
134	酸素バーナ	SANSO BĀNA	A burner to burn by using oxygen or oxygen enriching air.		fuel oxygen burner, oxy-fuel burner
135	ウォールフレームバーナ	WŌRU-HUREMU BĀNA	A burner having such structure as to form a flat flame in a direction perpendicular to the axial line direction and to elongate the flame along the wall surface in the furnace.		wall flame burner
136	低 NO _x バーナ (ていえぬおっくすばーな)	TEI-ENUOKKUSU BANA	A burner built-in the body with a structure to restrict the generation of NO _x in combustion.		low NO _x burner

No.	Term (Japanese character)	Reading	Definition	Informative reference	
				Idiom	English equivalent
137	分割火炎形バーナ	BUNKATU- KAENGATA BĀNA	A burner of a kind of low NO _x burner to divide a formed flame into several independent small flames.		divided flame type burner
138	セラミックバーナ	SERAMIKKU BĀNA	A burner used with ceramic material on a part relating to main function of burner.		ceramic burner
139	輝炎バーナ	KIEN BĀNA	A burner so made as to generate luminous flame high in radiation rate from the flame.		luminous flame burner
140	直接点火バーナ	TYOKUSETU- TENKA BANA	A burner to ignite the main burner according to by electric arc or the like of direct high voltage without using a lighting-up burner.		direct igniting burner
141	熱交換器付バーナ	NETUKŌKANKI- TUKI BĀNA	A burner built-in with a heat exchanger to preheat the air for combustion by combustion exhaust gas.	REKYUPERĒTA- TUKI BĀNA	recuperative burner
142	ラジアントチューブバーナ	RAZIANTO- TYŪBU BĀNA	A burner provided with a radiant tube to burn with long flame in it.		radiant tube burner
143	フレアスタック	HUREA SUTAKKU	A device to burn the combustible exhaust gas coming out from a petroleum refining plant or the like at the upper end part of chimney or the like.		flare stack

(2) Structure

No.	Term (Japanese character)	Reading	Definition	Informative reference	
				Idiom	English equivalent
201	ノズルチップ	NOZURU TIPPU	A jet opening for fuel.		nozzle tip
202	送油管	SŌYUKAN	A pipe to feed oil.	DŌYUKAN	oil tube, feed tube
203	戻り油管	MODORIYU-KAN	A pipe to return the oil.		oil return tube
204	たわみ管	TAWAMI-KAN	A pipe capable of flexing corresponding to elongation and shrinkage in axial direction of pipe, displacement in lateral direction, bending displacement, etc. in piping system.	HUREKISIBURU- TYŪBU, KATŌKAN	flexible tube
205	油旋回室	ABURA-SENKAI- SITU	A chamber where oil swirls in a burner head part.		swirl chamber
206	送風管	SŌHŪKAN	A tube to feed air for combustion.		blast tube, blower tube
207	エアレジスタ	EA-REZISUTA	A part to regulate the air for combustion to a flow and quantity suitable for combustion and constructed of a flame stabilizer, air cone, guide vane, etc.		air register
208	保炎器	HOEN-KI	A part of a burner having function to stabilize the flame. It is divided mainly into two types of swirler and diffuser.	SUTABIRAIZA	flame stabilizer

No.	Term (Japanese character)	Reading	Definition	Informative reference	
				Idiom	English equivalent
209	スワラ	SUWARA	A flame stabilizer of type to swirl the flame.	SENKAIKI	swirler
210	ディフューザ	DIHYŪZA	A flame stabilizer of type to stabilize the flame by means of a flame stabilizing board.	HOEN BAN, HUREMU- HORUDA	diffuser, flame holder
211	エアコーン	EA-KŌN	A part to regulate the air flow at the top end part of burner.		air cone
212	案内羽根	ANNAI-BANE	A vane to give regulated flow or swirl the air or gas.		guide vane, air whirl
213	ノズルアダプタ	NOZURU- ADAPUTA	A metal fitting to attach a nozzle.		nozzle adapter
214	霧化筒	MUKATŌ	A cylinder to atomize oil according to centrifugal force.	ATOMAIZINGU- KAPPU	atomizing cup
215	空気ノズル	KŪKI NOZURU	A blowing-out opening of airs for atomizing and combustion.	EA-NOZURU	air nozzle
216	油量調整装置	YURYŌ- TYŌSEI-SŌTI	A device to increase and decrease the oil quantity.		oil controller
217	空気量調整ハンドル	KŪKIRYŌ- TYŌSEI HANDORU	A handle to be operated when increasing and decreasing the air amount.	EA-HANDORU	air handle
218	油量調整ハンドル	YURYŌ- TYŌSEI HANDORU	A handle to be operated when increasing and decreasing the oil amount.	OIRU-HANDORU	oil handle