

Automotive parts - Pipe fittings - Glossary of terms

1. Scope

This standard covers the terms regarding pipe fittings used for automotive pipes and parts and portions that constitute the pipe fittings (hereinafter referred to as "terms").

2. Classification

The classifications of the terms shall be as specified in **Table 1**.

Table 1 Classifications of terms

Major classifications	Medium classifications
1 Terms for steel pipe fittings	1.1 Basic terms
	1.2 Types of fitting
	1.3 Parts and portions
2 Terms for non steel pipe fittings	2.1 Basic terms
	2.2 Types of fitting
	2.3 Parts and portions

3. Numbers, terms and definitions

The numbers, terms, definitions and references are as follows.

Remark 1: If two expressions are specified for one term, the first expression shall be used preferentially.

Remark 2: The words in () in the "Term" column are usually omitted.

Remark 3: For the terms that are confusing to read in Japanese, their readings are expressed in [] below each term.

Remark 4: The shapes and structures shown in **Figs. 1 to 84** are examples

Remark 5: [GAKU] in the "Reference" column represents that the Mechanical Engineering Edition of Scientific Terms is the source of the term. The tables may also include the following abbreviations. [JIS] Japanese Industrial Standard, [SAE] Society of Automotive Engineers, [BS] British Standard, [DIN] Deutsches Institut für Normung, [BNA] Bureau des Normes de L'Automobile, and [ISO] International Organization for Standardization.

1. Terms for steel pipe fittings

1.1 Basic terms

No.	Term	Definition	Reference	
			English equivalent	Applicable standard
1101	kan or kuda	Cylindrical part in which fluid flows.	pipe [GAKU][SAE] [BS] tube [SAE][BS]	
1102	kan tsugite or kuda tsugite	General term for all parts and portions composing structures connecting or disconnecting pipes. Remark: A single part or portion composing a pipe fitting is defined (pipe) fitting portion.	pipe joint [GAKU] pipe fitting [SAE][BS] tube fitting [SAE][BS] tube connection tube coupling tube union	
1103	ketsugo hoshiki	Connection type/structure of pipe fitting	type of pipe fitting	

1.2 Types of fitting⁽¹⁾

No.	Term	Definition	Reference	
			English equivalent	Applicable standard
1201	furea-shiki kan tsugite	General term for pipe fittings that perform connection by giving a flared shape to the pipe ends (Figures 1 to 4).	flared type tube fitting [SAE][BS]	JASO F402 JASO F412
1202	furea-nashi-shiki kan tsugite	General term for pipe fittings that are not flared type pipe fittings (Figures 5 to 12).	flareless type tube fitting [SAE]	JASO F403
1202-1	oribu-shiki kantsugite	Pipe fittings that perform connection by attaching olives to the pipe ends (Figures 5 and 6).	ball sleeve (compression) type tube fitting [SAE] olive type tube fitting [BS]	JASO F403
1202-2	nippuru-shiki kantsugite	Pipe fittings that perform connection by soldering nipples to the pipe ends (Figures 7 to 9).	soldered nipple type tube fitting [BS]	JASO F403
1202-3	neji oribu-shiki kan tsugite	A pipe fitting that performs connection by attaching olives to the joining nut ends (Figure 10).	threaded sleeve type tube fitting [SAE]	
1202-4	ai-shiki kan tsugite	A pipe fitting that performs connection by brazing an eye to the pipe end (Figure 11). Remark: When the brazed portions of the eyes perform the connection, the name of the connecting parts shall be used as the name of the fitting type. Example: Flared type male pipe fitting (Figure 12).	eye joint banjo type tube fittings [DIN] brazed connection [SAE] flared connection [SAE]	JASO F403

1.2 Types of fitting⁽¹⁾ (continued)

No.	Term	Definition	Reference	
			English equivalent	Applicable standard
1203	mesu-gata (kan tsugite)	Pipe fittings that perform connection with sockets that receive joining nuts such as built-in joining portions, connectors, or unions (Figures 1, 3, 4, 6 and 10).	inverted style (tube fitting) [SAE] female style [BS] socket joint	
1204	osu-gata (kan tsugite)	Pipe fittings that perform connection with spigots that receive joining nuts such as built-in joining portions, connectors, or unions (Figures 2, 5, 7, 8 and 9).	external style (tube fitting) [SAE] male style [BS] spigot joint	

Note:⁽¹⁾

No. 1203 and 1204 are sometimes used in combination with No. 1201 and 1202.

(Example)

Flared type female pipe fitting and flared type male pipe fitting.

Flareless type female pipe fitting and flareless type male pipe fitting.

1.3 Parts and portions

No.	Term	Definition	Reference	
			English equivalent	Applicable standard
1301	furea	General term for portions of pipe ends that are processed to have a cone or a bulged shape (Figures 13 to 16).	flare [SAE][BS] bordel [DIN]	JASO M101
1302	(kyuju-do) furea	Flares with inside conical angles of 90 degrees (Figures 13 and 14).	(90 deg) flare	JASO M101
1303	nanajyu-yon-do furea or shichijyu-yon-do furea	Flares with inside conical angles of 74 degrees (Figures 13 and 14).	74 deg flare [SAE]	
1304	shinguru furea ⁽²⁾ (JASO-gata)	A flare with single layer cone portion (Figure 13).	single flare [SAE][BS]	JASO M101
1305	daburu furea	Flare with double-layered (folded) cone portion (Figure 14).	double flare [SAE][BS]	JASO M101 ISO 13486-1
1306	shinguru furea ⁽³⁾ (ISO-gata)	A flare with bulged portion (Figure 15).	bordel F [DIN] single flare [ISO]	ISO 4038 JASO F412
1307	o-ring furea	A flare with a shape in which an o-ring fits (Figure 16).	o-ring flare	JASO M101

1.3 Parts and portions (continued)

No.	Term	Definition	Reference	
			English equivalent	Applicable standard
1308	oribu	An olive-shaped fitting part to be attached to the fitting pipe ends (Figure 17).	ball sleeve [SAE] olive loose olive [BS] bague biconique [BNA]	JASO F403
1309	nippuru	Nipple-shaped fitting parts to be soldered to the fitting pipe ends (Figures 18 to 20).	nipple [SAE][BS] end liner [BS]	
1310	ensui nippuru	A nipple with a cone-shaped seating portion (Figure 18).	conical nipple [BS]	
1311	tama nippuru	A nipple with a rotating body ball/round-shaped seating portion (Figure 19).	ball nipple	JASO F403
1312	hira nippuru	A nipple with a flat seating portion (Figure 20).	plain nipple	JASO F403
1313	hira nippuru gasuketto	A gasket used as the seating face of a plain nipple (Figure 21).	plain nipple gasket	JASO F403
1314	ai	A magnifying glass-shaped joining part brazed or attached to the fitting pipe ends (Figure 22).	eye fittings banjo union inlet union [SAE]	JASO F403
1315	shito-bu	A portion that tightly contacts with a fitting. Remark: Seating portions exist on both joining parts and pipe ends.	Seat sealing portion contact surface contact line	
1316	(tsukuridashi) (kan) tsugite	Built-in joining portions to be connected with the pipes (Figures 23 to 27).	built-in joint seat logement taraude [BNA]	
1317	(kan) tsugite natto	Joining parts that are attached to the pipes to tighten the joining portions (Figures 28 to 33).	fitting nut [SAE] union nut compression screw [SAE] captive nut joint nut	

1.3 Parts and portions (continued)

No.	Term	Definition	Reference	
			English equivalent	Applicable standard
1318	ai-shiki kan tsugite boruto	A joining part to tighten an eye (Figure 34).	inlet union screw [SAE] eye joint bolt	JASO F403
1319	ai-shiki kan tsugite gasuketto	Gaskets to sandwich an eye (Figure 35).	inlet union gasket [SAE] eye joint gasket	JASO F403
1320	konekuta	Joining parts to be attached mainly to the equipment side when connecting pipes to equipment (Figures 36 to 47, 56 to 58, and 61).	connector [SAE][BS] connection [SAE]	
1321	yunion	Joining parts to be used as the connecting parts between two or more pipes (Figures 48 to 55, 59, 60 and 62). Remark: The term <i>yunion</i> is often used as a synonym of <i>konekuta</i> .	union [SAE][BS] double ended union [BS]	
1322	(sutoreto) konekuta (sutoreto) yunion	Connectors or unions that have straight internal fluid passageways and that are not bent or forked (Figures 36, 37, 44 to 49, and 55 to 62).	straight union joint	
1323	erubo konekuta erubo yunion	Connectors or unions that have internal fluid passageways that are bent 90 or 45 degrees (Figures 38, 39 and 50).	elbow [SAE][BS]	
1324	ti konekuta ti yunion	Connectors or unions that have internal fluid passageways that are forked in tee shapes (three way) (Figures 40, 41, 51 and 52).	tee [SAE][BS] three way tee (union) [SAE] two way tee (connector) [SAE]	
1325	kurosu konekuta kurosu yunion	Connectors or unions that have internal fluid passageways that are forked in cross shapes (four way) (Figures 42, 53 and 54).	cross [SAE][BS]	
1326	(kanyo) (oneji) konekuta	Connectors with joining portions that have tapered male threads to be connected to equipment (Figures 36 to 42, 44 to 47, and 61).	external pipe thread connector [SAE] external taper thread connector [BS]	