



BKL

THAI BENKAN CO.,LTD.



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58 Soi Watkrunai Bangkru Suksawat 70 Prapadaeng Samutprakarn 10130

THAILAND

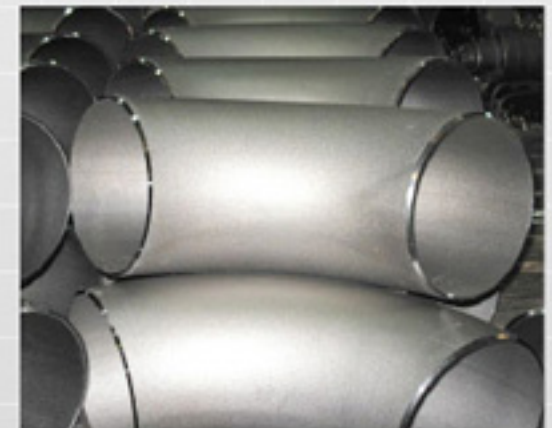
Tel : 662 463-6235-7 Fax : 662 463-8241

www.thaibenkan.co.th

Thai Benkan Co., Ltd. commenced business, here in Thailand, as a major manufacturer of steel butt-welding fittings in 1987.

The company's products which are used in a wide range of piping applications, such as oil refinery, chemical plants, power station and building constructions, are produced by using the same machineries, technology and quality control systems originally established in Japan.

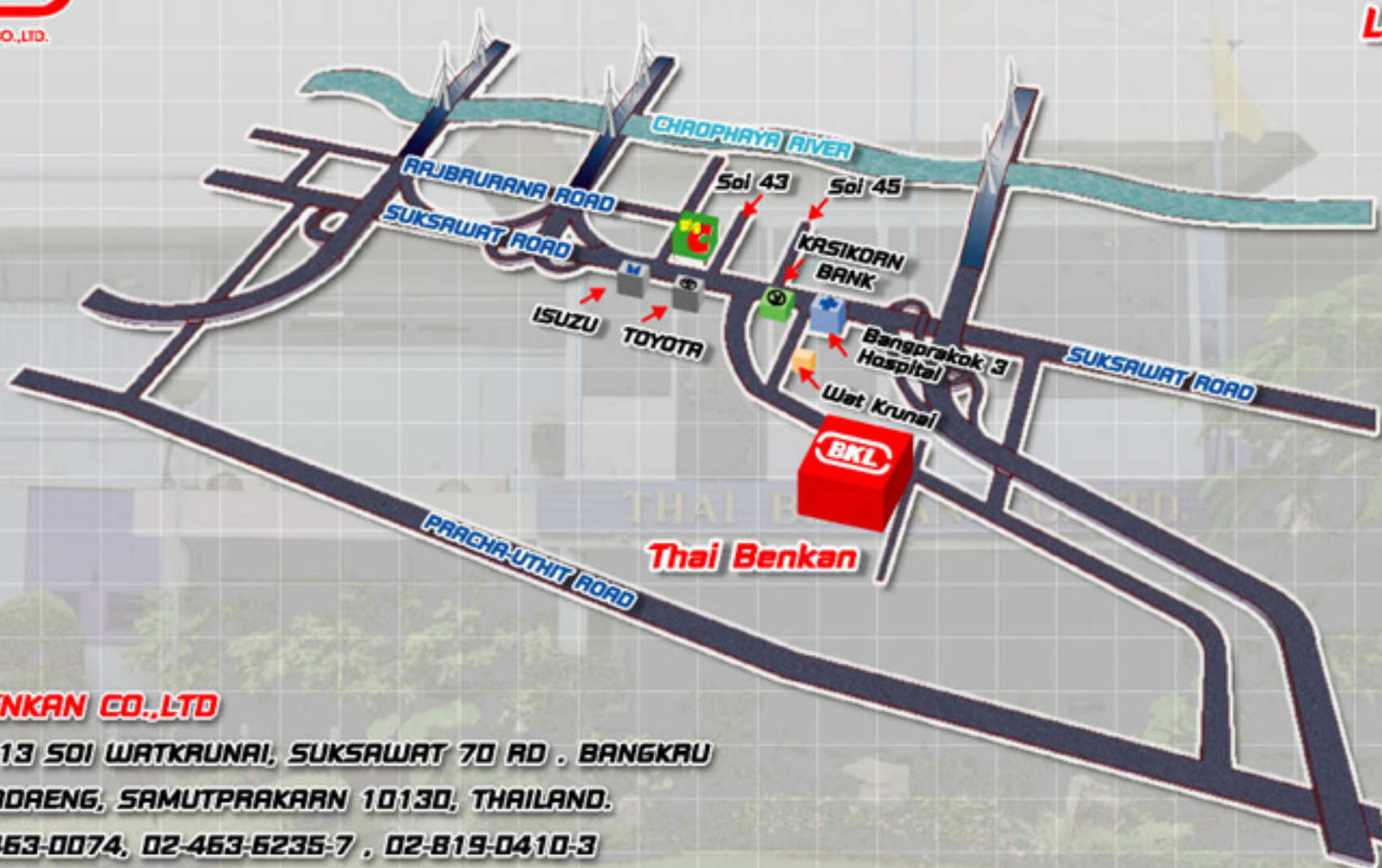
In 2004, Thai Benkan acquired the highly reputable, and well known brand of BKL, which was associated for more than 50 years with BKL Fittings United Kingdom. The brand of BKL has become the brand of Thai Benkan.



Company Name	THAI BENKAN CO.,LTD.	
Brand Name	BKL	
Address	58, Soi Watkrunai, Bangkru, Suksawat 70, Prapadeaeng, Samutprakarn, 10130, Thailand	
Capital	Baht 75,010,000	
Employees	320	
Establish	August 5th, 1987	
Area	Land: 25,185 sq. meters	Building: 13,825 sq. meters
Major Equipment	Pipe cutting machine 8 Elbow bending machine 8 Elbow sizing machine 9 Reducer forming machine 3 Tee forming machine 2	Cap forming machine 1 Heat treatment furnace 3 Shot blast 4 Bevelling machine 39 Coating line 1



LOCATION



THAI BENKAN CO.,LTD
 58 MOO 13 SOI WATKRUNAI, SUKSAWAT 70 RD . BANGKRU
 PHRAPRAENG, SAMUTPRAKARN 10130, THAILAND.
 TEL. 02-463-0074, 02-463-6235-7 , 02-819-0410-3
 FAX. 02-463-6238, 02-463-8241

Production Range Chart



Carbon Steel (Seamless) A234 WPB A420 WPL6	Type	Diameter	Wall Thickness	Remarks	
	Elbow Long	90, 45	1/2" - 12"	STD, XS, S40, S80, (S160 / 1/2"-4")	S20, S30 = 8" - 12"
		180	1/2" - 8"	STD, XS, S40, S80, (S160 / 1 1/4"-4")	
	Elbow Short	90	1" - 12"	STD, XS, S40, S80, (S160 / 1"-4")	
	Reducer	Concentric Eccentric	3/4" - 16"	STD, XS, S40, S80, S160, XXS	S20, S30 = 8" - 16" XXS = 1/2" - 12"
	Tee		1/2" - 6"	STD, XS, S40, S80 (8 - 16", up to XS thickness under plan)	S20, S30 = 8" - 12"
Cap		1 1/2" - 12"	STD, XS, S40, S80		
Capacity 1,200 tons / Month					



Stainless Steel (Seamless / Welded) A403 WP304/304L WP316/316L	Type	Diameter	Wall Thickness	Remarks	
	Elbow Long	90, 45	1/2" - 12"	S10S, S20S, S40, S80	
	Elbow Short	90	1" - 2" / 5" - 12"		
	Reducer	Concentric Eccentric	3/4" - 12" (6" - 12" : Upto 2 size reduction)	S10S, S20S, S40	
	Tee		1/2" - 6"	S10S, S20S, S40 (8" - 12", up to XS thickness under plan)	
	Cap		1 1/2" - 12"	S10S, S20S, S40	
Capacity 130 tons / Month					



Duplex (Seamless / Welded) A815 S31803 S32205 S32506 S32750 S32760	Type	Diameter	Wall Thickness	Remarks	
	Elbow Long	90, 45	1/2" - 12"	S10S, S20S, S40, (S80 / - 5")	Up to 5" = Seamless 6" - 12" = Welded
	Elbow Short	90	1" - 2" / 5" - 12"		
	Reducer	Concentric Eccentric	3/4" - 12" (6" - 12" : Upto 2 size reduction)		
	Tee		1/2" - 6"	(Tee 8 - 12", up to XS thickness under plan)	
	Cap		1 1/2" - 12"		



Alloy Steel (Seamless) A234 WP1 WP5 WP9 WP11 WP12 WP22 WP91	Type	Diameter	Wall Thickness	Remarks	
	Elbow Long	90, 45	1/2" - 12"	STD, XS, S40, S80, (S160 / 1/2" - 4")	S20, S30 = 8" - 12"
		180	1/2" - 8"	STD, XS, S40, S80, (S160 / 1 1/4" - 4")	
	Elbow Short	90	1" - 12"	STD, XS, S40, S80, (S160 / 1" - 4")	
	Reducer	Concentric Eccentric	3/4" - 16"	STD, XS, S40, S80, S160, XXS	S20, S30 = 8" - 16" XXS = 1/2" - 12"
	Tee		1/2" - 6"	STD, XS, S40, S80, (8 - 16", up to XS thickness under plan)	S20, S30 = 8" - 12"
Cap		1 1/2" - 12"	STD, XS, S40, S80		



<Applicable Standards>

ASTM	A234 A403 A420 A815 A860	Carbon & alloy steel fittings Stainless steel fittings Fittings for low temperature service Duplex stainless fittings Fittings with high tensile property
ASME	B16.9 / B16.11 / B16.25	For dimension
MSS	SP25 SP75 SP43	For marking procedure Fittings with high tensile property
JIS	B2311 / B2312 / B2313	
EN	10204 3.1	For Inspection Certificate



<Qualifications>

Name; ISO9001:2000 Pressure Equipment Directive (PED 97/23/EC) JIS Mark Scheme, Certificate of Compliance	Certified by; Lloyd's Register Quality Assurance Limited Lloyd's Register Quality Assurance Limited Japan Quality Assurance Organization (JQA)
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<Approvals>

Name; Shell Global Solotuin Exxon Mobil (Asia) Total Chevron Dow Chemical-Asia / Pacific CSA Syn crude Aramco Overseas Company SABIC KOC KNPC PDO	Country; Netherland Singapore France Indonesia Holland Canada Canada Japan Saudi Arabia Kuwait Kuwait Oman
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Company Standards	Carbon Steel & Alloy Steel	Stainless Steel & Duplex
Coating	Rust-preventive paint (black)	Passivity treatment
Marking	Die stamping	Electrolysis etching Ink marking
Packing	21/2" & below : Wooden case 3" & above : Wooden crate 8" & above : (a) : wooden pallet & shrink pack (b) : wooden crate	(a) Carton box (b) Carton box & put on crate (c) Carton box & put on pallet

Note : Company standards are subject to minor changes without prior notice.



Butt-Welding-Fittings-Weight-And-Volume

Nominal Pipe Size	WEIGHT (Kg)									
	90° Long		90° Short		Reducer		Tee		Cap	
	STD	XS	STD	XS	STD	XS	STD	XS	STD	XS
1/2	0.08	0.10	-	-	-	-	0.08	0.11	0.04	0.05
3/4	0.10	0.13	-	-	0.06	0.07	0.12	0.16	0.05	0.07
1	0.15	0.19	0.10	0.13	0.11	0.14	0.25	0.31	0.11	0.14
1-1/4	0.26	0.34	0.17	0.23	0.15	0.20	0.42	0.55	0.14	0.19
1-1/2	0.37	0.49	0.24	0.33	0.24	0.32	0.60	0.80	0.17	0.24
2	0.65	0.89	0.43	0.60	0.37	0.51	0.87	1.19	0.23	0.33
2-1/2	1.30	1.71	0.87	1.14	0.70	0.92	1.67	2.19	0.40	0.53
3	2.03	2.73	1.35	1.82	0.91	1.23	2.41	3.24	0.66	0.91
3-1/2	2.82	3.91	1.88	2.61	1.28	1.77	3.12	4.32	0.96	1.36
4	3.83	5.36	2.55	3.57	1.45	2.02	4.12	5.77	1.17	1.68
5	6.55	9.23	4.37	6.08	2.52	3.54	6.59	9.29	1.92	2.77
6	10.1	15.3	6.75	10.2	3.63	5.47	9.73	14.7	2.90	4.49
8	20.4	30.9	13.6	20.3	5.80	8.76	18.1	27.4	5.20	7.24
10	36.2	48.8	24.1	32.49	9.76	13.1	30.9	41.7	9.18	12.5
12	52.8	69.9	35.2	46.6	13.9	18.3	44.2	58.5	13.3	17.8
14	67.9	89.9	45.2	59.9	25.6	33.9	53.5	70.9	15.9	21.2
16	89.0	118.0	59.3	78.6	31.0	41.1	66.1	87.7	20.0	26.7

Nominal Pipe Size	VOLUME (m3)				
	90° Long	90° Short	Reducer	Tee	Cap
1/2	-	-	-	-	-
3/4	-	-	-	-	-
1	-	-	-	-	-
1-1/4	-	-	-	-	-
1-1/2	-	-	-	-	-
2	0.001	0.001	-	0.001	-
2-1/2	0.002	0.001	0.001	0.001	-
3	0.003	0.002	0.001	0.002	-
3-1/2	0.004	0.003	0.001	0.003	0.001
4	0.005	0.004	0.001	0.004	0.001
5	0.010	0.007	0.002	0.007	0.001
6	0.016	0.011	0.004	0.011	0.002
8	0.037	0.025	0.007	0.022	0.005
10	0.070	0.046	0.013	0.040	0.009
12	0.118	0.079	0.021	0.067	0.015
14	0.164	0.109	0.042	0.091	0.021
16	0.245	0.163	0.059	0.126	0.029

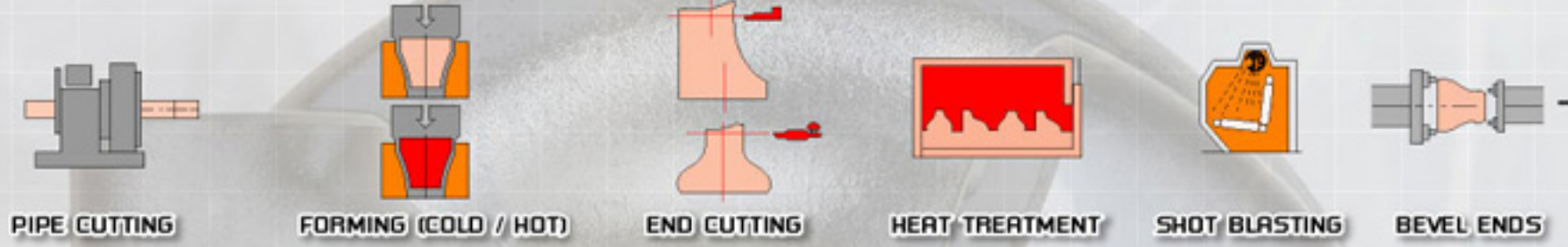
* Weight and volume are according to theoretical calculation.
* Figures of tees are on equal tees and figures of reducers are on one size reduction reducers.

CARBON Steel

ELBOW



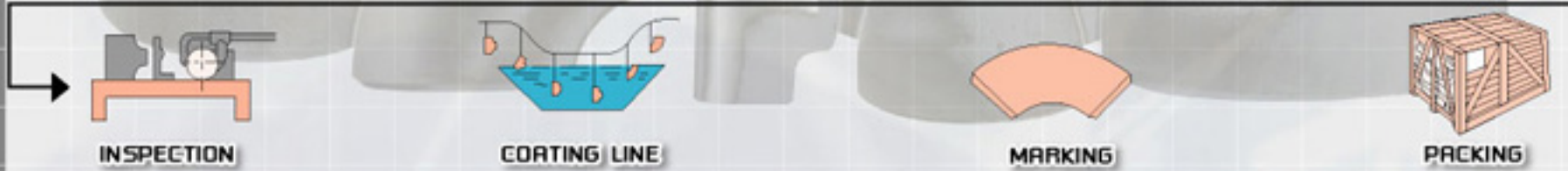
REDUCER



TEE



CAP



STAINLESS Steel

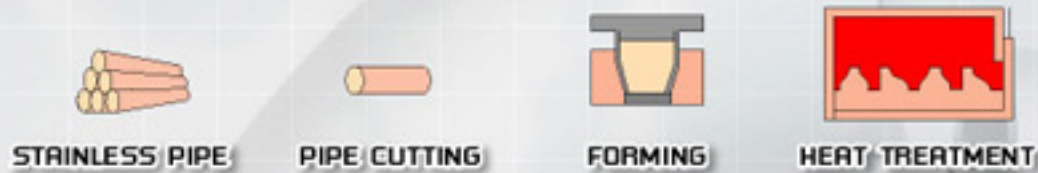
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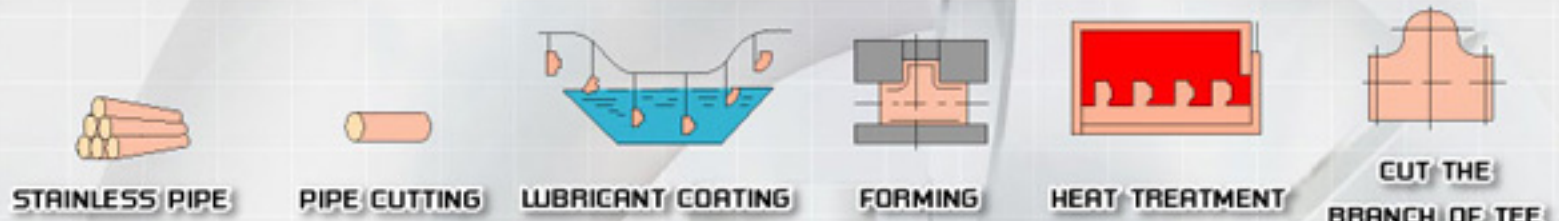
ELBOW



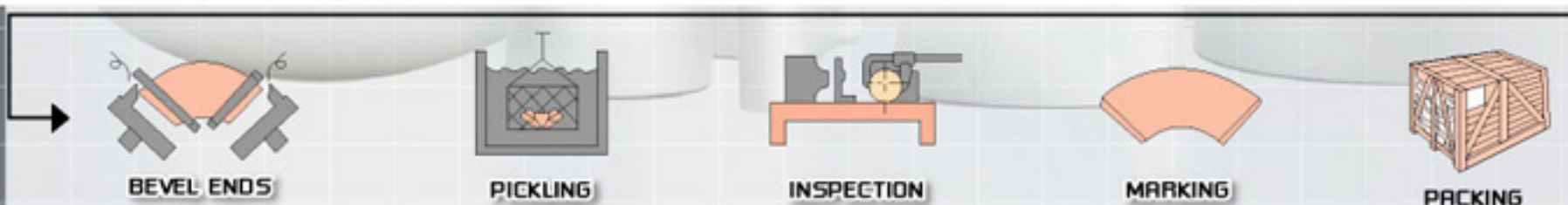
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TEE



CAP



Carbon Steel & Alloy Steel

Elbow



90°
Elbow (Long)



90°
Elbow (Short)



45°
Elbow (Long)



180°
Elbow (Long)



180°
Elbow (Short)

Reducer



Reducer
(Concentric)



Reducer
(Eccentric)

Tee



T (Straight)



T (Reducing)

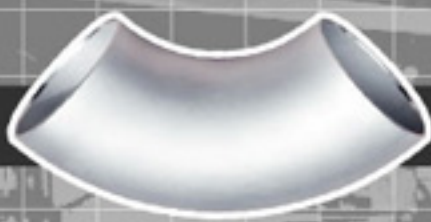
Cap



Cap

Stainless Steel & Duplex

Elbow



90°
Elbow (Long)



90°
Elbow (Short)



45°
Elbow (Long)

Reducer



Reducer
(Concentric)



Reducer
(Eccentric)

Tee



T (Straight)



T (Reducing)

Cap



Cap