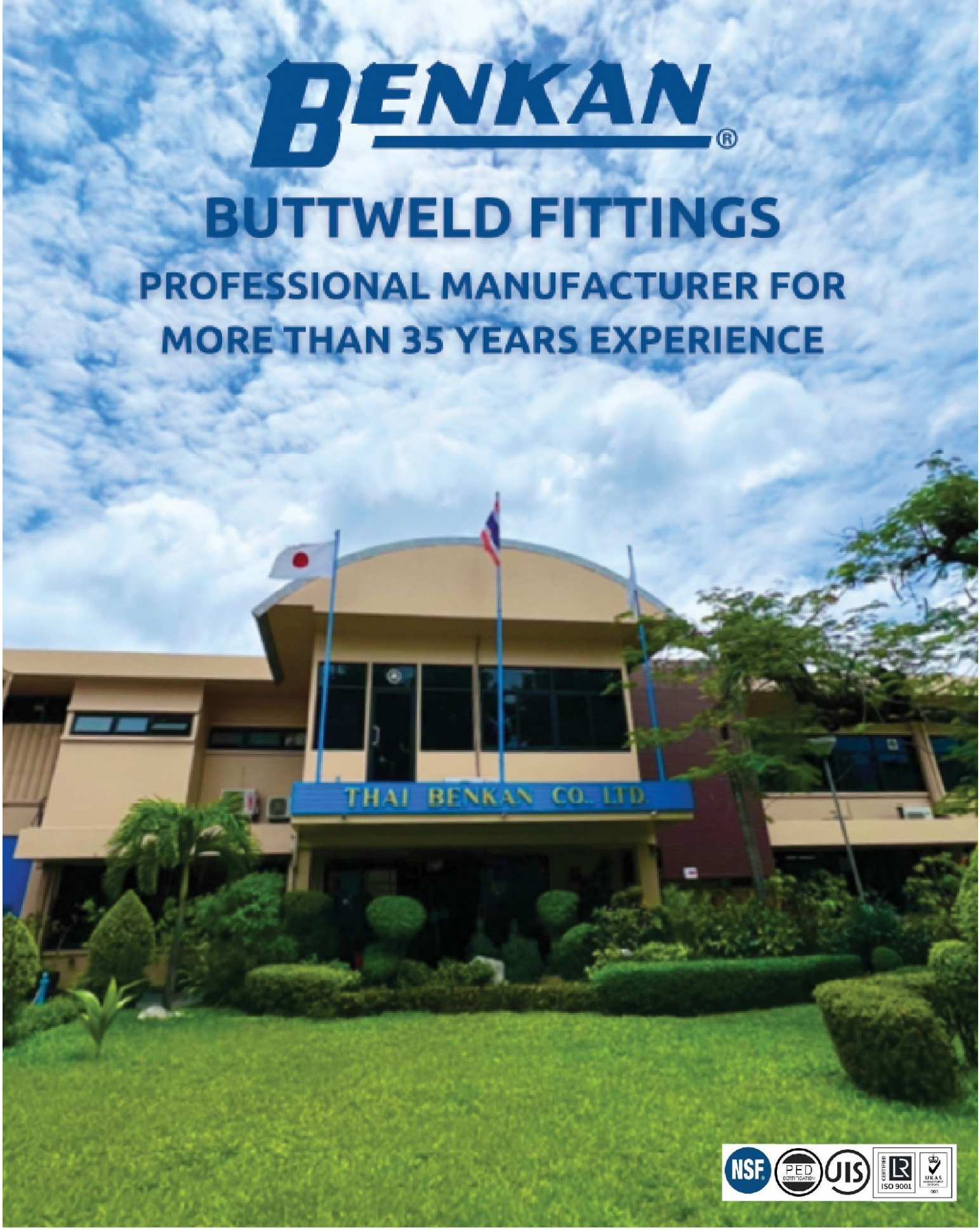
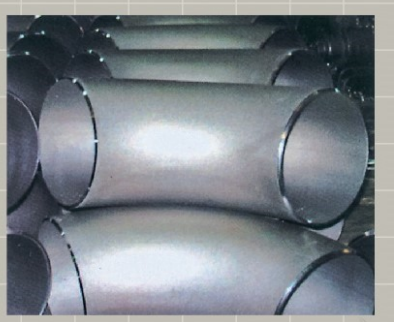
BENKAN®

BUTTWELD FITTINGS

PROFESSIONAL MANUFACTURER FOR MORE THAN 35 YEARS EXPERIENCE



THAI BENKAN CO.,LTD.
58 Soi Watkrunai Bangkru Suksawat 70 Prapadaeng Samutprakarn 10130
THAILAND
Tel : 662 463 0074, 662 463 6235-7, 662 819 0410-13
www.thaibenkan.co.th / Email : sales@thaibenkan.co.th



Company Name	THAI BENKAN CO.,LTD.	
Brand Name	BENKAN	
Address	58, Soi Watkrunai, Bangkru, Suksawat 70, Prapadaeng, Samutprakarn, 10130, Thailand	
Capital	Baht 165,094,500	
Employees	520	
Establish	August 5th, 1987	
Area	Land : 25,185 sq. meters	Building : 13,825 sq. meters
Major Equipment	Pipe cutting machine 18	Cap forming machine 1
	Elbow bending machine 8	Heat treatment furnace 3
	Elbow sizing machine 9	Shot blast 7
	Reducer forming machine 5	Bevelling machine 39
	Tee forming machine 4	Coating line 1

BENKAN®

LOCATION

Distance to Major port
Seaport : Klong Toey Port 10 km.
Airport : Suvarnabhumi airport 30 km.

THAI BENKAN CO.,LTD
58 MOO 13 SOI WATKRUNAI, SUKSAWAT 70 RD. BANGKRU
PHRAPRADAENG, SAMUTPRAKARN 10130, THAILAND

BUTTWELD FITTINGS MANUFACTURER

FOR MORE THAN 35 YEARS EXPERIENCE

CONTACT US

OUR BROCHURE

ABOUT US

BENKAN BRAND

Benkan brand is known and respected in more than 100 countries around the world. The result thousands of Benkan Fittings in use a wide variety of energy-intensive industries – power generation, oil & gas, refineries, petrochemical, chemical processing, LNG and LPG production, iron-steelmaking and shipbuilding.

Thai Benkan Co., Ltd. was established here in Thailand in 1987. We are manufacturing a high quality and large volume of Buttweld fittings in Carbon Steel , Stainless Steel, Alloy steel, Duplex and Super Duplex material grade.

OUR QUALITY

INTERNATIONAL QUALITY

As a premium brand, Thai Benkan Fittings sets international quality standards. A high level of technological expertise in forming and heat treatment.

JAPAN QUALITY

Our fittings are manufactured by adopting Japanese technology and quality control system to ensure and supply best quality of products in the world.

QUALIFICATIONS

Lloyd's Register

Certificate of Approval

This is to certify that the Management System of:

Thai Benkan Co., Ltd.

58 Soi Wat Krunai, Bangkru, Prapradaeng, Samutprakan, 10130, Thailand

has been approved by Lloyd's Register to the following standards:

ISO 9001:2015

Approval number(s): ISO 9001 – 0046829

The scope of this approval is applicable to:

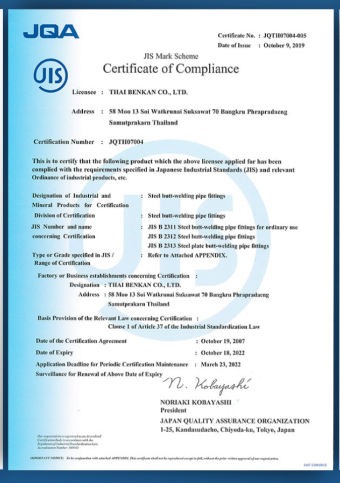
Manufacture of Carbon Steel, Alloy Steel, Austenitic Steel, Duplex Steel and Nickel Alloy Steel butt welding pipe fittings.

Lalit Cantha

Area Operations Manager - SAMEA

Issued by: Lloyd's Register International (Thailand) Limited

for and on behalf of: Lloyd's Register Quality Assurance Limited



JQA

Certificate No. : JQTI107004-005
Date of Issue : October 9, 2019

JIS Mark Scheme
Certificate of Compliance

Licensee : THAI BENKAN CO., LTD.

Address : 58 Moo 13 Soi Watkrunai Suksawat 70 Bangkru Phrapradaeng Samutprakarn Thailand

Certification Number : JQTI107004

This is to certify that the following product which the above licensee applied for has been complied with the requirements specified in Japanese Industrial Standards (JIS) and relevant Ordinance of industrial products, etc.

Designation of Industrial and Mineral Products for Certification : Steel butt-welding pipe fittings

Division of Certification : Steel butt-welding pipe fittings

JIS Number and name concerning Certification : JIS B 2311 Steel butt-welding pipe fittings for ordinary use; JIS B 2312 Steel butt-welding pipe fittings; JIS B 2313 Steel plate butt-welding pipe fittings

Type or Grade specified in JIS / Range of Certification : Refer to Attached APPENDIX.

Factory or Business establishments concerning Certification :
Designation : THAI BENKAN CO., LTD.
Address : 58 Moo 13 Soi Watkrunai Suksawat 70 Bangkru Phrapradaeng Samutprakarn Thailand

Basis Provision of the Relevant Law concerning Certification : Clause 1 of Article 37 of the Industrial Standardization Law

Date of the Certification Agreement : October 19, 2007

Date of Expiry : October 18, 2022

Application Deadline for Periodic Certification Maintenance : March 23, 2022

Surveillance for Renewal of Above Date of Expiry

N. Kobayashi

NORIAKI KOBAYASHI
President

JAPAN QUALITY ASSURANCE ORGANIZATION
1-25, Kandonaiburho, Chiyoda-ku, Tokyo, Japan

Lloyd's Register

EU CERTIFICATE OF QUALITY SYSTEM APPROVAL

In accordance with the requirements of the Pressure Equipment Directive 2014/68/EU

This is to certify that the Quality Management System of:

Thai Benkan Co., Ltd
58 Soi Watkrunai, Bangkru, Suksawat 70, Prapadaeng
Samutprakarn 10130, Thailand

has been assessed against the requirements of Annex I, Paragraph 4.3 of the Pressure Equipment Directive 2014/68/EU and EN 764-5: 2014, Article 4.2, and conforms to the requirements for the products shown below:

Manufacture of butt welding pipe fittings (Elbow, Tee, Reducer, Caps) with maximum OD up to 16"
(see attached schedule)

Approval is subject to the continued maintenance of the quality system in accordance with the requirements of the above Directive and EN 764-5: 2014, Article 4.2, and the on-going surveillance. Products are as detailed on the attached schedule.

Certificate No: 0343/PED/MUM/061003B/1
Original Approval: 25 August 2006
Current Certificate: 27 October 2021
Certificate Expiry: 31 July 2024
LR NL Notified Body Number 0343

B.Viswanath on behalf of Lloyd's Register Nederland B.V.

This certificate transfers LRQA Ltd. (UK Notified Body 0038) Certificate No 0038/ PED/MUM/061003B/1 issued on 05 November 2019 which is now under the responsibility of EU Notified Body No. 0343 (LRNL)

Lloyd's Register Nederland B.V. (Reg. no. 24237948) is a private limited company registered in the Netherlands with registered office at R.P. Van Der Marelstraat 41-3, 3042MB Rotterdam. A subsidiary of Lloyd's Register Group Limited.

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

LRNL0343 EXPED/Annex I & 3 Form/Revision 2020/Nov/3

NSF International
789 N. Dixboro Road, Ann Arbor, MI 48105 USA

RECOGNIZES

Thai Benkan Co., Ltd.
Facility: Samut Prakan, Thailand

AS COMPLYING WITH NSF/ANSI/CAN 61 AND ALL APPLICABLE REQUIREMENTS.
PRODUCTS APPEARING IN THE NSF OFFICIAL LISTING ARE AUTHORIZED TO BEAR THE NSF MARK.

This certificate is the property of NSF International and must be returned upon request. This certificate remains valid as long as this client has products in NSF's Official Listings for the referenced standards. For the most current and complete Listing information, please access NSF's website (www.nsf.org).

March 8, 2022
Certificate# C0585557 - 01

Theresa Bellish
Senior Director Water Commercial

"20230112"

BENKAN®

BUTTWELD FITTINGS

Carbon Steel & Alloy Steel

Elbow

90o Elbow (Long)

90o Elbow (Short)

45o Elbow (Long/Short)

180o Elbow (Long)

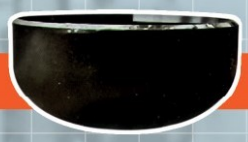
180o Elbow (Short)

Reducer

Reducer (Concentric)

Reducer (Eccentric)

Cap



Cap

Tee

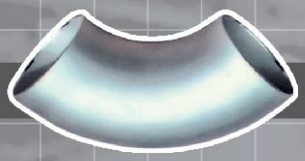
T (Straight)

T (Reducing)

BARRED TEE

Stainless Steel & Duplex

Elbow



90o Elbow (Long)

90o Elbow (Short)

45o Elbow (Long)

Reducer

Reducer (Concentric)

Reducer (Eccentric)

Tee

T (Straight)

T (Reducing)

Cap

Cap

<Applicable Standards>

ASTM/ASME	A/SA234	Carbon & alloy steel fittings
	A/SA420	Fitting for low temperature service
	A/SA403	Stainless steel fittings
	A/SA815	Duplex stainless fittings
ASTM	A860	Fittings with high tensile property
ASME	B16.9 / B16.25	For dimension
MSS	SP25	For marking procedure
	SP75	Fittings with high tensile property
	SP43	
JIS	B2309 / B2311	
	B2312 / B2313	
CSA	Z245.11	For Inspection Certificate
EN	10204 3.1 / 3.2	
ISO	15590-2	
NACE	MR0175 / ISO 15156	
	MR0103 / ISO 17495	

Company Standards	Carbon Steel & Alloy Steel	Stainless Steel & Duplex
Coating	Rust-preventive, Paint (black)	Pickling
Marking	Die stamping, Stencil	Laser marking
Packing	Carton box Wooden case Wooden crate Wooden pallet & Shrink pack	

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

<Qualifications>

Name :	Certified by :
ISO9001 : 2015	Lloyd's Register Quality Assurance Limited
Pressure Equipment Directive (PED 2014/68/EU)	Lloyd's Register Quality Assurance Limited
JIS Mark Scheme, Certificate of Compliance	Japan Quality Assurance Organization (JQA)
ISO17782/Norsok M-650	Det Norske Veritas
NSF 61	NSF International
DNV GL	DNV GL

<Approvals>

Name :	Country :
Shell Global	Netherland
Exxon Mobil (Asia)	Singapore
Total	France
Chevron	Global
Dow Chemical-Asia / Pacific	Netherland
CSA	Canada
Syncrude	Canada
Saudi Aramco	Saudi Arabia
SABIC	Saudi Arabia
KOC	Kuwait
KNPC	Kuwait
PDO	Oman
OXY	Oman
ADNOC	UAE
ADCO	UAE
ADMA	UAE
GASCO	UAE
ZADCO	UAE
TAKREER	UAE
BOROUGE	UAE
BAPCO	Bahrain
QP	Qatar
QCHEM	Qatar
QATARGAS	Qatar
QATAR PETROCHEMICAL	Qatar
TATWEER PETROLEUM	Bahrain
PTTGC	Thailand
PTTEP	Thailand
THAIOIL	Thailand
IRPC	Thailand

Buttweld 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

* 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.

VOLUME (m3)					
Nominal Pipe Size	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

Production Range Chart

BENKAN®

Carbon Steel (Seamless)	Type		Diameter	Wall Thickness	Remarks
A 234 WPB A 420 WPL6 A 860 WPHY42 A 860 WPHY52 A 860 WPHY60 A 860 WPHY65 A 860 WPHY70	Elbow Long	90,45	1/2'' - 12''	STD - Sch160 / XXS	(XXS : 3/4'' - 12'')
		180	1/2'' - 8''	STD - Sch160	(Sch160 : 11/4'' - 4'')
	Elbow Short	90,45	1'' - 12''	STD - Sch160 / XXS	(45ES 2" up)
		180	1'' - 8''	STD - Sch160	(Sch160 : 11/2'' - 6'')
	Reducer	Concentric Eccentric	3/4'' - 16''	STD - Sch160 / XXS	
	Tee		1/2'' - 16''	STD - Sch80 / XS	(Sch160 : 1/2'' - 8'') (XXS : 11/2'' - 8'')
	Cap		1 1/4 '' - 14''	STD - Sch80 / XS	(Sch120 : 4'' - 8'') (Sch160 / XXS : 11/2'' - 6'')

Stainless Steel (Seamless/Welded)	Type		Diameter	Wall Thickness	Remarks
A 403 WP304 / 304L WP316 / 316L WP S31254	Elbow Long	90,45	1/2'' - 4''	Sch10S - Sch160 / XXS	
			5'' - 20''	Sch10S - Sch80S	
	Elbow Short	90	1'' - 4''	Sch10S - Sch160 / XXS	
			5'' - 20''	Sch10S - Sch80S	
	Reducer	Concentric Eccentric	3/4'' - 16''	Sch10S - Sch160 / XXS	(Sch160 / XXS : 3/4" - 8") (Sch120 : 4" - 10")
	Tee		1/2'' - 8''	Sch10S - Sch160 / XXS	(XXS : 11/2'' - 8'')
			10'' - 16''	Sch10S - Sch80S	
	Cap		1 1/4'' - 14''	Sch10S - Sch80S	(Sch10S-Sch80S : 1 1/4" - 14") (Sch160 / XXS : 1 1/2" - 4")

Duplex Stainless Steel (Seamless/Welded)	Type		Diameter	Wall Thickness	Remarks
A 815 S31803 S32205 S32750 S32760	Elbow Long	90,45	1/2'' - 16''	Sch10S - Sch80S	(Sch80S / 1/2'' - 4'')
	Elbow Short	90	1'' - 2'' 4'' - 16''	Sch10S - Sch80S	
	Reducer	Concentric Eccentric	3/4'' - 16''	Sch10S - Sch80S	
	Tee		1/2'' - 12''	Sch10S - Sch80S	(Sch40S : 1/2'' - 12'') (Sch80S : 1/2'' - 6'')
	Cap		1 1/4'' - 14''	Sch10S - Sch80S	(Sch10S-Sch80S : 1 1/4" - 14") (Sch160 / XXS : 1 1/2" - 4")

Alloy Steel (Seamless)	Type		Diameter	Wall Thickness	Remarks
A 234 WP1 WP5 WP9 WP11 WP12 WP22 WP91	Elbow Long	90,45	1/2'' - 12''	STD - Sch160 / XXS	(XXS : 3/4'' - 12'')
		180	1/2'' - 8''	STD - Sch160	(Sch160 / 11/4'' - 4'')
	Elbow Short	90	1'' - 12''	STD - Sch160 / XXS	
		180	1'' - 8''	STD - Sch160	(Sch160 : 11/2'' - 6'')
	Reducer	Concentric Eccentric	3/4'' - 16''	STD - Sch160 / XXS	
	Tee		1/2'' - 16''	STD - Sch80 / XS	(Sch160 : 1/2'' - 8'') (XXS : 11/2'' - 8'')
	Cap		1 1/4'' - 14''	STD - Sch80 / XS	

Thai Benkan Co.,Ltd.
E-mail : sales@thaibenkan.co.th
Website : http://www.thaibenkan.co.th
Address : 58 Moo 13, Soi Watkrunai, Suksawat Rd., Bangkru, Phrapradaeng, Samutprakarn, 10130, Thailand

INCH UNITS

ANSI Pipe Schedule

OD = Inches
Wall thickness = Inches
Weight = lbs/ft
Vol/ft = ft^3

Nominal Pipe Size Inches	OD Inches	10	20	30	STD	40	60	XS	80	100	120	140	160	XXS	Figures based on austenitic steel 5S	10S	40S	80S	Shipping Vol/ft ft^3
1/8	0.405			W.Thick	0.068	0.068		0.095	0.095							0.049	0.068	0.095	0.004
				Wt-Lbs/Ft	0.24	0.24		0.31	0.31							0.19	0.24	0.32	
1/4	0.540				0.088	0.088		0.119	0.119							0.065	0.088	0.119	0.007
					0.42	0.42		0.54	0.54							0.34	0.43	0.55	
3/8	0.675				0.091	0.091		0.126	0.126							0.065	0.091	0.126	0.011
					0.57	0.57		0.74	0.74							0.43	0.58	0.75	
1/2	0.840				0.109	0.109		0.147	0.147				0.188	0.294	0.065	0.083	0.109	0.147	0.014
					0.85	0.85		1.09	1.09				1.31	1.71	0.55	0.68	0.87	1.11	
3/4	1.050				0.113	0.113		0.154	0.154				0.219	0.308	0.065	0.083	0.113	0.154	0.025
					1.13	1.13		1.47	1.47				1.94	2.44	0.70	0.88	1.15	1.50	
1	1.315				0.133	0.133		0.179	0.179				0.250	0.358	0.065	0.109	0.133	0.179	0.039
					1.68	1.68		2.17	2.17				2.84	3.66	0.89	1.43	1.71	2.21	
1 1/4	1.660				0.140	0.140		0.191	0.191				0.250	0.382	0.065	0.109	0.140	0.191	0.064
					2.27	2.27		3.00	3.00				3.76	5.21	1.13	1.85	2.32	3.06	
1 1/2	1.900				0.145	0.145		0.200	0.200				0.281	0.400	0.065	0.109	0.145	0.200	0.081
					2.72	2.72		3.63	3.63				4.86	6.41	1.31	2.13	2.77	3.70	
2	2.375				0.154	0.154		0.218	0.218				0.344	0.436	0.065	0.109	0.154	0.218	0.127
					3.65	3.65		5.02	5.02				7.46	9.03	1.64	2.69	3.72	5.12	
2 1/2	2.875				0.203	0.203		0.276	0.276				0.375	0.552	0.083	0.120	0.203	0.276	0.187
					5.79	5.79		7.66	7.66				10.01	13.69	2.53	3.60	5.91	7.81	
3	3.500				0.216	0.216		0.300	0.300				0.438	0.600	0.083	0.120	0.216	0.300	0.279
					7.58	7.58		10.25	10.25				14.32	18.58	3.09	4.42	7.73	10.46	
3 1/2	4.000				0.226	0.226		0.318	0.318						0.083	0.120	0.226	0.318	0.364
					9.11	9.11		12.50	12.50						3.55	5.07	9.29	12.76	
4	4.500				0.237	0.237		0.337	0.337		0.438		0.531	0.674	0.083	0.120	0.237	0.337	0.459
					10.79	10.79		14.98	14.98		19.00		22.51	27.54	4.00	5.72	11.01	15.28	
5	5.563				0.258	0.258		0.375	0.375		0.500		0.625	0.750	0.109	0.134	0.258	0.375	0.703
					14.62	14.62		20.78	20.78		27.04		32.96	38.55	6.49	7.93	14.91	21.20	
6	6.625				0.280	0.280		0.432	0.432		0.562		0.719	0.864	0.109	0.134	0.278	0.432	0.989
					18.97	18.97		28.57	28.57		36.39		45.35	53.16	7.75	9.48	19.35	29.14	
8	8.625		0.250	0.277	0.322	0.322	0.406	0.500	0.500	0.594	0.719	0.812	0.906	0.875	0.109	0.148	0.322	0.500	1.695
			22.36	24.70	28.55	28.55	35.64	43.39	43.39	50.95	60.71	67.76	74.69	72.42	10.13	13.67	29.12	44.26	
10	10.750		0.250	0.307	0.365	0.365	0.500	0.500	0.594	0.719	0.844	1.000	1.125	1.000	0.134	0.165	0.365	0.500	2.613
			28.04	34.24	40.48	40.48	54.74	54.74	64.43	77.03	89.29	104.13	115.64	104.13	15.49	19.02	41.29	55.83	
12	12.750		0.250	0.330	0.375	0.406	0.562	0.500	0.688	0.844	1.000	1.125	1.312	1.000	0.156	0.180	0.375	0.500	3.673
			33.38	43.77	49.56	53.52	73.15	65.42	88.63	107.32	125.49	139.67	160.27	125.49	21.40	24.65	50.55	66.73	
14	14.000	0.250	0.312	0.375	0.375	0.438	0.594	0.500	0.750	0.938	1.094	1.250	1.406		0.156	0.188			4.450
		36.71	45.61	54.57	54.57	63.44	85.05	72.09	106.13	130.85	150.79	170.21	189.11		23.53	28.28			
16	16.000	0.250	0.312	0.375	0.375	0.500	0.656	0.500	0.844	1.031	1.129	1.438	1.594		0.165	0.188			5.827
		42.05	52.27	62.58	62.58	82.77	107.50	82.77	136.61	164.82	192.43	233.64	245.25		28.46	32.39			
18	18.000	0.250	0.312	0.438	0.375	0.562	0.750	0.500	0.938	1.156	1.375	1.562	1.781		0.165	0.188			7.345
		47.39	58.94	82.15	70.59	104.67	138.17	92.45	170.92	207.96	244.14	274.22	308.50		32.06	36.48			
20	20.000	0.250	0.375	0.500	0.375	0.594	0.812	0.500	1.031	1.281	1.500	1.750	1.969		0.188	0.218			9.111
		52.73	78.60	104.13	78.60	123.11	166.40	104.13	208.87	256.10	296.37	341.09	379.17		40.58	46.98			
22	22.000	0.250	0.375	0.500	0.375		0.875	0.500	1.125	1.375	1.625	1.875	2.125		0.188	0.218			11.018
		58.07	86.61	114.81	86.61		197.41	114.81	250.81	302.88	353.61	403.00	451.06		44.68	51.72			
24	24.000	0.250	0.375	0.562	0.375	0.688	0.969	0.500	1.219	1.531	1.812	2.062	2.344		0.218	0.218			13.137
		63.41	94.62	140.68	94.62	171.29	238.35	125.49	296.58	367.39	429.39	483.12	542.13		56.48	64.68			
26	26.000	0.312	0.500		0.375			0.500											15.361
		85.60	136.17		102.63			136.17											
28	28.000	0.312	0.500	0.625	0.375			0.500											17.833
		92.26	146.85	182.73	110.64			146.85											
30	30.000	0.312	0.500	0.625	0.375			0.500							0.250	0.312			20.482
		98.93	157.53	196.08	118.65			157.53							81.02	100.91			
32	32.000	0.312	0.500	0.625	0.375	0.688		0.500											23.307
		105.59	168.21	209.43	126.66	230.08		168.21											
34	34.000	0.312	0.500	0.625	0.375	0.688		0.500											28.344
		112.25	178.89	222.78	134.67	244.77		178.89											
36	36.000	0.312	0.500	0.625	0.375	0.750		0.500											29.487
		118.92	189.57	236.13	142.68	282.35		189.57											
38	38.000				0.375			0.500											32.877
					150.69			200.25											
40	40.000				0.375			0.500											36.444
					158.70			210.93											
42	42.000				0.375			0.500											40.187
					166.71			221.61											
44	44.000				0.375			0.500											44.107
					174.72			232.29											
46	46.000				0.375			0.500											48.168
					182.73			242.97											
48	48.000				0.375			0.500											52.441
					190.74			253.65											

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SI - UNITS (METRIC)

ANSI Pipe Schedule

OD = mm
Wall thickness = mm
Weight = kg/m
Vol/m = m^3

Nominal Pipe Size Inches	/ mm	OD mm	10	20	30	STD	40	60	XS	80	100	120	140	160	XXS	Figures based on austenitics steel 5S	10S	40S	80S	Shipping Vol/m m^3
1/8	6	10.30			W.Thick →	1.73	1.73		2.41	2.41							1.24	1.73	2.41	0.0001
					Wt/Mtr →	0.37	0.37		0.47	0.47							0.28	0.36	0.48	
1/4	8	13.70				2.24	2.24		3.02	3.02							1.65	2.24	3.02	0.0001
						0.63	0.63		0.80	0.80							0.51	0.64	0.82	
3/8	10	17.10				2.31	2.31		3.20	3.20							1.65	2.31	3.20	0.0003
						0.84	0.84		1.10	1.10							0.64	0.86	1.12	
1/2	15	21.30				2.77	2.77		3.73	3.73				4.78	7.47	1.65	2.11	2.77	3.73	0.0004
						1.27	1.27		1.62	1.62				1.95	2.55	0.82	1.01	1.30	1.65	
3/4	20	26.70				2.87	2.87		3.91	3.91				5.56	7.82	1.65	2.11	2.87	3.91	0.0007
						1.69	1.69		2.20	2.20				2.90	3.64	1.04	1.31	1.71	2.24	
1	25	33.40				3.38	3.38		4.55	4.55				6.35	9.09	1.65	2.77	3.38	4.55	0.0011
						2.50	2.50		3.24	3.24				4.24	5.45	1.33	2.13	2.55	3.29	
1 1/4	32	42.20				3.56	3.56		4.85	4.85				6.35	9.70	1.65	2.77	3.56	4.85	0.0018
						3.39	3.39		4.47	4.47				5.61	7.77	1.68	2.76	3.46	4.56	
1 1/2	40	48.30				3.68	3.68		5.08	5.08				7.14	10.15	1.65	2.77	3.68	5.08	0.0023
						4.05	4.05		5.41	5.41				7.25	9.56	1.95	3.17	4.13	5.51	
2	50	60.30				3.91	3.91		5.54	5.54				8.74	11.07	1.65	2.77	3.91	5.54	0.0036
						5.44	5.44		7.48	7.48				11.11	13.44	2.44	4.01	5.54	7.63	
2 1/2	65	73.00				5.16	5.16		7.01	7.01				9.53	14.02	2.11	3.05	5.16	7.01	0.0053
						8.63	8.63		11.41	11.41				14.92	20.39	3.77	5.36	8.81	11.64	
3	80	88.90				5.49	5.49		7.62	7.62				11.13	15.24	2.11	3.05	5.49	7.62	0.0079
						11.29	11.29		15.27	15.27				21.35	27.68	4.60	6.59	11.52	15.59	
3 1/2	90	101.60				5.74	5.74		8.08	8.08						2.11	3.05	5.74	8.08	0.0103
						13.57	13.57		18.63	18.63						5.29	7.55	13.84	19.01	
4	100	114.30				6.02	6.02		8.56	8.56		11.13		13.49	17.12	2.11	3.05	6.02	8.56	0.0130
						16.07	16.07		22.32	22.32		28.32		33.54	41.03	5.96	8.52	16.40	22.77	
5	125	141.30				6.55	6.55		9.53	9.53		12.70		15.88	19.05	2.77	3.40	6.55	9.53	0.0199
						21.77	21.77		30.97	30.97		40.28		49.11	57.43	9.67	11.82	22.20	31.59	
6	150	168.30				7.11	7.11		10.97	10.97		14.27		18.26	21.95	2.77	3.40	7.11	10.97	0.0280
						28.26	28.26		42.56	42.56		54.20		67.56	79.22	11.55	14.13	28.83	43.42	
8	200	219.10		6.35	7.04	8.18	8.18	10.31	12.70	12.70	15.09	18.26	20.62	23.01	22.23	2.77	3.76	8.18	12.70	0.0480
				33.31	36.81	42.55	42.55	53.08	64.64	64.64	75.92	90.44	100.92	111.27	107.92	15.09	20.37	43.39	65.59	
10	250	273.00		6.35	7.80	9.27	9.27	12.70	12.70	15.09	18.26	21.44	25.40	28.58	25.40	3.40	4.19	9.27	12.70	0.0740
				41.77	51.03	60.31	60.31	81.55	81.55	96.01	114.75	133.06	155.15	172.33	155.15	23.08	28.34	61.52	83.19	
12	300	323.80		6.35	8.38	9.53	10.31	14.27	12.70	17.48	21.44	25.40	28.58	33.32	25.40	3.96	4.57	9.53	12.70	0.1040
				49.73	65.20	73.88	79.73	108.96	97.46	132.08	159.91	186.97	208.14	238.76	186.97	31.89	36.73	75.52	99.43	
14	350	355.60	6.35	7.92	9.53	9.53	11.13	15.09	12.70	19.05	23.83	27.79	31.75	35.71		3.96	4.78			0.1260
			54.69	67.90	81.33	81.33	94.55	126.71	107.39	158.10	194.96	224.65	253.56	281.70		35.06	42.14			
16	400	406.40	6.35	7.92	9.53	9.53	12.70	16.66	12.70	21.44	26.19	30.96	36.53	40.49		4.19	4.78			0.1650
			62.64	77.83	93.27	93.27	123.30	160.12	123.30	203.53	245.56	286.64	333.19	365.35		42.41	48.26			
18	450	457.00	6.35	7.92	11.13	9.53	14.27	19.05	12.70	23.83	29.36	34.93	39.67	45.24		4.19	4.78			0.2080
			70.57	87.71	122.38	105.16	155.80	205.74	139.15	254.55	309.62	363.56	408.26	459.37		47.77	60.46			
20	500	508.00	6.35	9.53	12.70	9.53	15.09	20.62	12.70	26.19	32.54	38.10	44.45	50.01		4.78	5.54			0.2580
			78.55	117.15	155.12	117.15	183.42	247.83	155.12	311.17	381.53	441.49	508.11	564.81		60.46	70.00			
22	550	559.00	6.35	9.53	12.70	9.53		22.23	12.70	28.58	34.93	41.28	47.63	53.98		4.78	5.54			0.3120
			86.54	129.13	171.09	129.13		294.25	171.09	373.83	451.42	527.02	600.63	672.26		66.57	77.06			
24	600	610.00	6.35	9.53	14.27	9.53	17.48	24.61	12.70	30.96	38.89	46.02	52.37	59.54		5.54	6.35			0.3720
			94.53	141.12	209.64	141.12	255.41	355.26	187.06	442.08	547.71	640.03	720.15	808.22		84.16	96.37			
26	650	660.00	7.92	12.70		9.53			12.70											0.4350
			127.36	202.72		152.87			202.72											
28	700	711.00	7.92	12.70	15.88	9.53			12.70											0.5050
			137.32	218.69	271.21	164.85			218.69											
30	750	762.00	7.92	12.70	15.88	9.53			12.70							6.35	7.92			0.5800
			147.28	234.67	292.18	176.84			234.67							120.72	150.36			
32	800	813.00	7.92	12.70	15.88	9.53	17.48		12.70											0.6600
			157.24	250.64	312.15	188.82	342.91		250.64											
34	850	864.00	7.92	12.70	15.88	9.53	17.48		12.70											0.7460
			167.20	266.63	332.12	200.31	364.90		266.63											
36	900	914.00	7.92	12.70	15.88	9.53	19.05		12.70											0.8350
			176.96	282.27	351.70	212.56	420.42		282.27											
38	950	965.00				9.53			12.70											0.9310
						224.54			298.24											
40	1000	1016.00				9.53			12.70											1.0320
						236.53			314.22											
42	1050	1067.00				9.53			12.70											1.1380
						248.52			330.19											
44	1100	1118.00				9.53			12.70											1.2490
						260.50			346.16											
46	1150	1168.00				9.53			12.70											1.3640
						272.25			351.82											
48	1200	1219.00				9.53			12.70											1.4850
						284.24			377.79											