

TPS TECHNITUBE[®]

RÖHRENWERKE GMBH



**NON FERROUS HEAT EXCHANGER & CONDENSER TUBES
EXTENDED SURFACE TUBES**



U-TUBES FOR HEAT EXCHANGERS



**HEAT EXCHANGER & CONDENSER EX STOCK
PIPES, FITTINGS AND FLANGES IN
STAINLESS STEEL, NICKEL & NICKEL ALLOYS, TITANIUM**



PT. Unggul Prakarsa Prisma
(Engineering Supply Company)

ALLOY RANGE BASE TUBES
Standard Grades – Comparison Table
– TECHNIFIN® –



Material	ASTM	DIN	German Mat.-No.	BS	Grade
Carbon Steel	A 179	ST 35.8/1	1.0305	3602/1	CFS 360
Carbon Steel	A 192 / A 161 Gr. LC	ST 35.8/1	1.0305	3059/2	CFS/HFS 360
Carbon Steel	A 210 Gr. A1	ST 45.8/1	1.0405	3602/1	CFS/HFS 410
Carbon Steel	A 210 Gr. C	17 Mn 4	1.0481	3602/1	CFS/HFS 460
Carbon Steel	A 106 Gr. B	ST 45.8/1	1.0305	3602/1	HFS 360
Low Alloy Steel	A 209 T1	16 Mo 5	1.5423	3606	245
Low Alloy Steel	A 213 / A 199 T11/T12	13 CrMo 44	1.7335	3604	621
Low Alloy Steel	A 213 / A 199 T22	10 CrMo 910	1.7380	3059	622-440
Low Alloy Steel	A 213 / A 199 T5	12 CrMo 195	1.7362	3604	625
Low Alloy Steel	A 213 / A 199 T9	X12 CrMo 91	1.7386	3059/3604	629-470
Low Alloy Steel	A 335 P1 / A 161 T1	16 Mo 5	1.5423	3606	245
Low Alloy Steel	A 335 P11 / P12 / A 200 T11/T12	13 CrMo 44	1.7335	3604	620-460
Low Alloy Steel	A 335 P22 / A 200 T22	10 CrMo 910	1.7380	3604	622
Low Alloy Steel	A 335 P5 / A 200 T5	12 CrMo 195	1.7362	3606	625
Low Alloy Steel	A 335 P9 / A 200 T9	X12 CrMo 91	1.7386	3059/2	629-590
Stainless Steel	A 213 / A 312 TP 304	X5 CrNi 189	1.4301	970	304 S 15
Stainless Steel	A 213 / A 312 TP 304L	X2 CrNi 189	1.4306	970	304 S 12
Stainless Steel	A 213 / A 312 TP 321	X10 CrNiTi 189	1.4541	970	321 S 12
Stainless Steel	A 213 / A 312 TP 316	X5 CrNiMo 1810	1.4401	970	315 S 16
Stainless Steel	A 213 / A 312 TP 316L	X2 CrNiMo 1810	1.4404	970	316 S 12
Stainless Steel	A 213 / A 312 TP 347	X10 CrNiNb 189	1.4550	970	347 S 17
Stainless Steel	A 213 / A 312 TP 316Ti	X6 CrNiMoTi 1810	1.4571	970	320 S 17
Stainless Steel	A 789 / A 790 UNS S 31803	X2 CrNiMo 11225	1.4462	—	
Stainless Steel	B 677 Alloy 904L	X2 CrNiMoN 22-5-3	1.4539	—	
Nickel	B 161 UNS NO 2200	Ni 99,2	2.4066	3074	NA 11
Nickel	B 161 UNS NO 2201	Ni 99,2	2.4068	3074	NA 12
Nickel-Copper	B 163 UNS NO 4400	NiCu30Fe	2.4360	3074	NA 13
Nickel-Chrom-Iron	B 163 UNS NO 6600	NiCr15Fe	2.4816	3074	NA 14
Nickel-Chrom-Iron	B 161 UNS NO 8825	NiCr21Mo	2.4858	3074	NA 16
Nickel-Chrom-Iron	B 468 UNS NO 8020	NiCr20CuMo	2.4660	—	
Nickel-Chrom-Iron	B 163 UNS NO 8800	X10 NiCrAlTi 3220	1.4876	3074	NA 15
Copper Alloy	B 75 / B 111 UNS C12200	Sf-Cu	2.0090	2871	C 106
Copper Alloy	B 75 / B 111 UNS C14200	CuAsp	2.1491	2871	C 107
Copper Alloy	B 111 UNS C44300	CuZn28Sn1	2.0470	2871	CZ 111
Copper Alloy	B 111 UNS C68700	CuZn20Al2	2.0460	2871	CZ 110
Copper Alloy	B 111 UNS C60800	CuAl5AS	2.0918	—	
Copper Alloy	B 111 UNS C70600	CuNi10Fe1Mn	2.0872	2871	CN 102
Copper Alloy	B 111 UNS C71500	CuNi30Mn1Fe	2.0882	2871	CN 107
Aluminium Alloys	Alloy 1050 / 1050A	Al 99,5	3.0255	1050A (1B)	
Aluminium Alloys	Alloy 5754	AlMg3	3.3535	(N5)	
Aluminium Alloys	Alloy 3003	AlMnCu	3.0517	—	
Aluminium Alloys	Alloy 5083	AlMg4,5Mn	3.3547	5083 (N8)	
Titanium	B 338 Gr. 2	Ti2	3.7035		

and other material grades on request.



A WIDE RANGE OF PRODUCTION AND STOCK CAPABILITIES ALLOWS US TO OFFER FIRST CLASS QUALITY PRODUCTS IN COMBINATION WITH REASONABLE PRICES AND FLEXIBLE DELIVERY TIMES ACCORDING TO YOUR NEED:

SUPPLY RANGE FOR:

- HEATEXCHANGER INDUSTRY
- CHEMICAL PLANTS
- PETROCHEMICAL PLANTS
- OIL AND GAS INDUSTRY
- STEEL PLANTS
- REFINERIES
- FERTILIZER PLANTS
- POWER STATIONS
- CEMENT FACTORIES
- SHIPYARDS



SEAMLESS TUBES AND PIPES:

- CARBON STEEL
ASTM A 53, ASTM A 106
ASTM A 161, ASTM A 179
ASTM A 192, ASTM A 210
ASTM A 556, API 5 L
- LOW TEMPERATURE STEEL
ASTM A 333, ASTM A 334
- ALLOY STEEL
ASTM A 161, ASTM A 199
ASTM A 200, ASTM A 209
ASTM A 213, ASTM A 335
ASTM A 423
- FERRITIC – MARTENSITIC STEEL
ASTM A 268
- STAINLESS STEEL
ASTM A 213, ASTM A 269
ASTM A 271, ASTM A 312,
ASTM A 376, ASTM B 677
- DUPLEX / SUPERDUPLEX
ASTM A 789, ASTM A 790
- NICKEL AND NICKEL ALLOYS
ASTM B 161, ASTM B 163
ASTM B 165, ASTM B 167
ASTM B 407, ASTM B 423
ASTM B 444, ASTM B 622
ASTM B 668, ASTM B 729
- TITANIUM
ASTM B 338, ASTM B 861
- COPPER AND COPPER ALLOYS
ASTM B 43, ASTM B 68
ASTM B 75, ASTM B 88
ASTM B 111, ASTM B 315
ASTM B 395, ASTM B 466
ASTM B 543
- ALUMINIUM AND ALUMINIUM ALLOYS
ASTM B 210, ASTM B 234
ASTM B 241



IN ANY STANDARD AND NON STANDARD GRADE, DIMENSION AND SHAPE.
NOT MENTIONED STANDARDS ON REQUEST.



WELDED TUBES AND PIPES:

- CARBON STEEL	ASTM A 53, ASTM A 178 ASTM A 214, ASTM A 226 ASTM A 671, ASTM A 672 ASTM A 691
- LOW TEMPERATURE STEEL	ASTM A 333, ASTM A 334
- ALLOY STEEL	ASTM A 423, ASTM A 671 ASTM A 672, ASTM A 691
- FERRITIC – MARTENSITIC STEEL	ASTM A 268
- STAINLESS STEEL	ASTM A 249, ASTM A 312 ASTM A 358, ASTM A 409 ASTM B 673, ASTM B 674 ASTM A 731
- DUPLEX / SUPERDUPLEX	ASTM A 789, ASTM A 790
- NICKEL AND NICKEL ALLOYS	ASTM B 464, ASTM B 468 ASTM B 514, ASTM B 515 ASTM B 516, ASTM B 517 ASTM B 619, ASTM B 626 ASTM B 704, ASTM B 705 ASTM B 725, ASTM B 730 ASTM B 775
- TITANIUM	ASTM B 338, ASTM B 862
- COPPER AND COPPER ALLOYS	ASTM B 467, ASTM B 543 ASTM B 608
- ALUMINIUM AND ALUMINIUM ALLOYS	ASTM B 313, ASTM B 547



FIN AND STUDDED TUBES IN VARIOUS MATERIALS AND SHAPES LIKE:

- "G" (EMBEDDED)	- "I"
- "L" (L-FIN)	- "N" (LOW FIN)
- "KL" (KL-FIN)	- "M" (MEDIUM FIN)
- "DL" / "LL" (DL/KL-FIN)	- "LFW" (LONGITUDINAL CHANNEL FIN)
- "HY" (EXTRUDED)	- "LFS" (FOR BOILER WALL CONSTRUCTION)
- "HYS" (EXTRUDED SERRATED)	- "S" (SQUARE FIN)
- "WO" (WELDED ON)	- "DOULBE S" (RETANGULAR FIN ON 2 TUBES)
- "WOS" (WELDED ON SERRATED)	- STUDDED TUBES



MATERIAL INSPECTION THROUGH ANY INDEPENDENT INSPECTION COMPANY LIKE TUEV, LLOYD'S REGISTER OF INDUSTRIAL SERVICES, SGS, BUREAU VERITAS AND OTHERS POSSIBLE.



PLATES

- CARBON STEEL	ASTM A 36, ASTM A 283 ASTM A 285, ASTM A 515 ASTM A 516
- ALLOY STEEL	ASTM A 203, ASTM A 204 ASTM A 387
- STAINLESS STEEL	ASTM A 167, ASTM A 176 ASTM A 240
- NICKEL AND NICKEL ALLOYS	ASTM B 127, ASTM B 162 ASTM B 168, ASTM B 409 ASTM B 424, ASTM B 443 ASTM B 463, ASTM B 575
- TITANIUM	ASTM B 265
- COPPER AND COPPER ALLOYS	ASTM B 169, ASTM B 171 ASTM B 248
- ALUMINIUM AND ALUMINIUM ALLOYS	ASTM B 209



ROUND, SQUARE AND HEXAGONAL BARS

- CARBON STEEL	ASTM A 29, ASTM A 108
- ALLOY STEEL	ASTM A 182, ASTM A 322
- STAINLESS STEEL	ASTM A 276, ASTM A 479
- NICKEL AND NICKEL ALLOYS	ASTM B 160, ASTM B 166 ASTM B 164, ASTM B 335 ASTM B 408, ASTM B 425 ASTM B 446, ASTM B 472
- TITANIUM	ASTM B 348
- COPPER AND COPPER ALLOYS	ASTM B 148, ASTM B 271
- ALUMINIUM AND ALUMINIUM ALLOYS	ASTM B 211, ASTM B 221



IN ANY STANDARD AND NON STANDARD GRADE, DIMENSION AND SHAPE.
NOT MENTIONED STANDARDS ON REQUEST.



FITTINGS

- ALLOY STEEL	ASTM A 234, ASTM A 350 ASTM A 420
- STAINLESS STEEL	ASTM A 182, ASTM A 403 ASTM A 815
- NICKEL AND NICKEL ALLOYS	ASTM B 366
- TITANIUM	ASTM B 363
- COPPER AND COPPER ALLOYS	ASTM B 61, ASTM B 62 ASTM B 271
- ALUMINIUM AND ALUMINIUM ALLOY	ASTM B 361



FLANGES AND FORGINGS

- ALLOY AND STAINLESS STEEL	ASTM A 182, ASTM A 350
- NICKEL AND NICKEL ALLOYS	ASTM B 462, ASTM B 564
- TITANIUM	ASTM B 348
- COPPER AND COPPER ALLOYS	ASTM B 62, ASTM B 271
- ALUMINIUM AND ALUMINIUM ALLOYS	ASTM B 211, ASTM B 247



SPECIAL BENDS, COILS AND DESIGN PARTS

OCTG – OIL COUNTRY TUBULAR GOODS

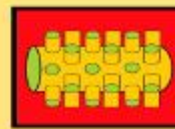
- API TUBING NON UPSET AND EXTERNAL UPSET
- TPS-OPTIFLOW TUBING
- TPS-TECHNISEAL NON UPSET PREMIUM TUBING
- TPS-MULTISEAL UPSET PREMIUM TUBING AND CASING
- MACARONI TUBING API OR PREMIUM JOINT
- EXTREME LINE CASING
- COUPLINGS
- BLAST JOINTS / FLOW COUPLINGS
- TUBING AND CASING FOR SPECIAL REQUIREMENTS
- PUP-JOINTS, CROSS OVERS, NIPPLES
- DRILL PIPE



BESIDE THE ASTM STANDARDS WE CAN ALSO SUPPLY THE MATERIAL ACC. TO DIN, BS, NFA, JIS, GOST AND OTHERS.

MATERIAL INSPECTION THROUGH ANY INDEPENDENT INSPECTION COMPANY LIKE TUEV, LLOYD'S REGISTER OF INDUSTRIAL SERVICES, SGS, BUREAU VERITAS AND OTHERS POSSIBLE.





TPS COMPLETE DELIVERY PROGRAMME

Stainless Steel & Nickel Alloy Tubes

Seamless Coldfinished Stainless Steel and Nickel Alloy Tubes; Welded Stainless Steel Tubes with Cold Worked Seam; Welded, Colddrawn and Heatreated Stainless Steel Tubes; Seamless and Welded Heatexchanger Tubes in Stainless Steel and Nickel Alloy Grades.

Size Range 6-60,3 mm Outside Diameter, also U-bended.

Grades Stainless Steel: AISI 304 (1.4301), 304L (1.4306), 321 (1.4541), 316 (1.4401/1.4436), 316 L (1.4404/1.4435), 316 Ti (1.4571); Special Ferritic Grades like AISI 405 (1.4002), 410 (1.4006), 430 (1.4016)

Special Grades:

TECHNICHROMO 904 L UNS N 08904, TECHNIDUPLEX 2205 UNS S 31803, DUPLINOS 1905 UNS S 31500, TECRONIMO 28.31.4, etc.; Nickel Alloys like TECHALLOY 200, 400, 600, 800, 825, 8020; Heat resisting Grades such as AISI 310/S and AISI 347.

Titanium Heat Exchanger Tubes in lengths up to 21 m - U-Tubes

TPS-OCTG PRODUCT & DELIVERY PROGRAMME:

Tubing and Casing from new production or ex stock with

- **TPS Multiseal** gastight Premium Two-Step Integral Joint Connections:
 - **TPS-Multiseal-TS 4 / TS 4 TR** • **TPS-Multiseal-TS 6 / TS 6 TR**
 - **TPS-Multiseal TS 8 / TS 8 TR** • **TPS-Multiseal-Flush-Joint**
- **TPS Techniseal** Premium Coupling Connection
- **TPS Optiflow** High Performance Coupling Connection
- **API Connections** as per API Spec. 5B

Tubing and Casing available in all Sizes and Grades according to API 5CT and also **TPS-Special** Grades.

Pup Joints, Cross-Over, Couplings, Blast Joints and Accessories in all Grades and Sizes according to Specification.

TPS Drill-Pipe as per API Standard 5D in all grades & sizes up to 5 1/2" incl.

Heatexchanger & Condenser Tubes ex stock

Carbon steel:	A 179, A 214, ST 35.8 I,
Alloy steel:	A 213/A 199, T 5, T 9
Stainless steel:	ASTM A 213 TP, 304/L, 321, 316/L, 316Ti
Non Ferrous:	Aluminium brass, AL 687, Admiralty brass AL 443, Copper Nickel 90/10, AL 706, Copper Nickel 90/30, AL 715

Seamless Stainless Steel Pipes, Fittings and Flanges ex Stock and from new production

Stock Material Grades: TP 304/1.4301, TP 304L/1.4306, TP 321/1.4541, TP 316/1.4401, TP 316L/1.4404, TP 316Ti/1.4571

Stock Sizes:	O.D.: 1/2" NB - 12" NB;	W.T.: Sch 10S, Sch 40S, 80S, 160
	O.D.: 21,3 mm - 323,9 mm;	W.T.: 2,11 - 33,32 mm

Fittings in Special Grades for your Piping Systems

Specification/Standards according to ASTM, DIN, BS and other international documentation; in form of: Seamless and Welded Buttweld Fittings, Forged Fittings, Flanges, Forgings, Fittings as per drawing and components according to your design.

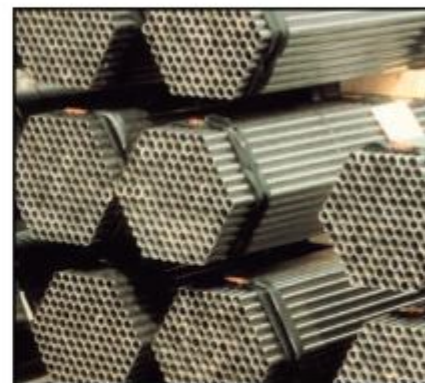
Specification: ASTM A 403, ASTM B 366, ASTM A 815, ASTM B 363, ASTM A 420, ASTM A 182, ASTM A 350, ASTM A 234.

Heatexchanger- and Condenser Tubes in NON - FERROUS Grades

Thinwalled Seamless Coldfinished Stainless Steel Tubes

Complete 'Piping Packages' in Stainless Steel Special Grades, e.g. TECHNICHROMO 904 L UNS N 08904, TECHNIDUPLEX 2205 UNS S 31803 and in Nickel Alloys.

The quality management system of **TPS** production, stock holding and trade is certified according to ISO 9001.



Seamless Stainless Steel Tubes



TPS-Multiseal-TS-8 Pin End



Fittings & Flanges



Finned Tubes

TPS TECHNITUBE
RÖHRENWERKE GMBH

General catalogue
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PIPES, FITTINGS AND FLANGES IN

- STAINLESS STEEL
- NICKEL AND NICKEL ALLOYS
- TITANIUM

YOUR PARTNER FOR PIPING SYSTEMS

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Seamless Tubes

- Stainless Steel
- Nickel Alloys
- Titanium

Made in Germany

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U-tubes for Heat Exchangers

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