

Seamless steel pipe for offshore applications in API 5L X52NO/S355NLHHO/ L360NO, X52QO/ S355QLHHO/ L360QO & X65QO/ S460QLHHO/ L460Q

**In compliance with ISO 3183, EN 10225,
NORSOK M-630 and M-120.**

**The “Universal” quality for both structural and line
pipe applications, for both low and high temperatures.**

**As well as corresponding flanges and fittings upgraded
to meet requirements from $\div 50^{\circ}$ C to $+400^{\circ}$ C**



ROLF LYCKE AS is a private limited company, established in 1919.
The company has grown and diversified to become a major supplier and stockist of pipe, fittings, flanges and valves in carbon, low temperature and stainless steel.

Divisions in Oslo, Stavanger and Bergen, allow for expeditious service and close monitoring of our customer's needs.

The company has a quality assurance system for all divisions, in conformity with the requirements of NS-EN ISO 9001:2015.

Competent employees, are always looking to update themselves with new technologies and make Rolf Lycke AS synonymous with quality and efficiency.

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Content

About Rolf Lycke AS...	2
Contents.....	3
1. Description.....	4
2. Chemical composition.....	4
3. Desulphurization	5
4. Mechanical properties.....	5
5. Impact testing.....	6
6. Trough thickness test.....	6
7. Inspection and NDT.....	6
8. Magnetic particle inspection.....	6
9. Heat treatment – API 5L	7
10. Hardness. NACE	7
11. Grain size.....	8
12. Hot and cold forming.....	8
13. Welding and flame cutting.....	8
14. Tolerances.....	8
15. Testing frequency.....	8
16. Hydrostatic test.....	9
17. Temporary corrosion protection	9
18. Quality assurance.....	9
19. Marking.....	9
20. Present stock program – pipes – lengths.....	10-13
21. Fittings.....	14
22. Flanges.....	14
Terms and conditions.....	15

1. Description.

Seamless steel pipe in API 5L X52NO & X52QO and X65QO/ ISO 3183 according to Rolf Lycke specification are made from steel by the oxygenetic or electric steel making process and are fully killed, with alloying elements giving a very finely grained structure. This means excellent resistance against brittle fracture and good aging resistance.

With the introduction of the NORSOK Standard it has been necessary to adjust our specifications accordingly.

Our specifications are based on the API 5LX standard for line pipe purposes but the composition and mechanical properties should also meet the requirements as per NORSOK Standard for structural purposes.

Today, both API and NORSOK specify Quenched and Tempered or Normalized as acceptable heat treatment conditions. Due to the present chemical composition with restrictions on certain elements, it is in many cases necessary with quenched and tempered condition in order to meet the requirements, particularly for bigger wall thicknesses.

Our specifications are applicable for a temperature range from ÷ 50° to + 400° C. Please note that we also supply corresponding flanges and fittings meeting the requirements of the NORSOK Standard.

2. Chemical composition

Below is the heat and product analysis in max. values, in weight %.

X52 grade:

ELEMENTS [max. values in mass %]	t≤40 mm	40 mm<t≤65 mm
C	0.16	0.16
Mn	1.60	1.60
Si	0.15-0.45	0.15-0.45
S	0.007	0.007
P	0.020	0.025
Cr	0.25	0.25
Mo	N: 0.08, Q T: 0.15	N: 0.08, QT: 0.15
Nb	0.05	0.05
V	N: 0.10, QT: 0.07	N: 0.10, QT: 0.07
Ti	0.02	0.02
Ni	0.30	0.30
Cu	0.35	0.35
Cr+Mo+Ni+Cu	0.80	0.80
Al	0.06	0.06
N	0.012	0.014
Al/N	min. 2.2:1	Min. 2.2:1
V+Nb	0.10	0.10
Nb+V+Ti	0.10	0.10
Sn	0.02	0.02
CEV	N: 0.43, QT: 0.39	N: 0.44, QT: 0.41
PCM	N: 0.25, QT: 0.23	For info. only

N: Normalized. QT: Quenched & Tempered.

X65 grade:

ELEMENTS [max. values in mass %]	t≤40 mm	40 mm<t≤65 mm
C	0.16	0.16
Mn	1.65	1.65
Si	0.15-0.45	0.15-0.45
S	0.010	0.010
P	0.025	0.025
Cr	0.30	0.50
Mo	0.25	0.50
Nb	0.05	0.07
V	0.10	0.12
Ti	0.04	0.04
Ni	0.50	0.50
Cu	0.30	0.50
Cr+Mo+Ni+Cu	0.80	1.00
Al	0.06	0.06
N	0.014	0.014
Al/N	min. 2.2:1	Min. 2.2:1
V+Nb	0.10	0.12
Nb+V+Ti	0.12	0.15
Sn	0.02	0.02
CEV	0.43	0.44
PCM	0.25	For info. only

3. Desulphurization

Manganese sulphides are typical inclusions in all manganese alloyed steels. They are not desired because of their tendency to segregate as they reduce the metallic binding. This results in reducing the impact strength especially transverse to the main rolling direction. The most important measure against this is to reduce the sulphur content. We specify max. 0,007%.

4. Mechanical properties - at room temperature

Below you will find the values for the mechanical properties for our modified quality:

	Below 40mm w.th.	
	X52	X65
Yield strength (Rp0.2)	345-360 N/mm²	440-580 N/mm²
Tensile strength (Rm)	460-620 Nmm²	550-700 N/mm²
Elongation (2")	acc. to API, however 22% min.	19%
Yield/tensile ratio	max. 0,88	0,90
Hardness	237 HBW max. (22HRC max, 250 HV10) according to NACE	
MR-01-75		
Testing position	acc. to API – longitudinal ≤ 168.3, transverse ≥ 219.1mm	
O.D.		

5. Impact testing.

The impact toughness (Charpy V-Notch) is tested at the temperature indicated in the order. If not mentioned the test temperature will be $\pm 50^{\circ}\text{C}$.

Min. requirements (10 x 10 specimen):

X52 grade:

	<u>$\pm 50^{\circ}\text{C}$ Transverse</u>	<u>$\pm 50^{\circ}\text{C}$ Longitudinal</u>
Average	50 J	60 J
Single	38 J	48 J

X65 grade:

	<u>$\pm 50^{\circ}\text{C}$ Transverse</u>	<u>$\pm 50^{\circ}\text{C}$ Longitudinal</u>
Average	60 J	60 J
Single	45 J	45 J

Please note that the values obtained are normally far above the min. requirements.

Hardness tests are taken at the same frequency as tensile specimen acc. To API 5L/ ISO 3183 to verify the maximum limit of 22 HRC/ 250 HV10/ 237 HBW (12 points) as shown in API 5L J.8.3.1/ Figure 1.

6. Through thickness test (TTT)

Testing shall be carried out in the final heat treatment condition. Testing shall be in accordance with EN 10164, to meet the following:

- EN 10164 Quality Class Z 35.
- The through thickness tensile strength shall be not less than 80% of the specified minimum tensile strength.

Lamellar tearing is a type of weld area cracking which occurs during, or after fabrication by welding. These cracks are mainly due to the non-metallic inclusions in the steel since they determine the through thickness ductility of rolled materials. Seamless pipe are not as exposed to lamellar tearing as plate and welded pipe, due to the difference in production methods. Our modified quality with very low sulphur content will give excellent results for the reduction of area (RAz).

The RAz value will be min. 35% of average values of 3 samples. Test results show that values of our pipe, are consistently higher than the min. values required. A test can be performed at extra cost if this should be considered necessary.

7. Inspection and NDT

In accordance with Annex K including Annex E of API 5L. All pipes are subjected to a 100% ultrasonic test according to ISO 10893-10:2011 for longitudinal defects acceptance level U2/C and ASTM E213 (Notch 5% - min.0.3/max 1.5mm for WT $\leq 50\text{mm}$, max. 3.0mm for WT $> 50\text{mm}$).

This is an automatic in-line process which is most suitable for seamless pipe. If needed, all pipe can be ultrasonically tested for laminations. This test is normally taken at the ends of the pipe. As pipe often are cut during mounting and welding, this test is normally done at site.

8. Magnetic particle inspection

MPI-test can also be carried out either from stock or from the mill. This test is often used on the bevelled end, or on the pipe ends.

9. Heat treatment – API 5L

Our X52 pipes are supplied in the normalised, or quenched and tempered condition. The normalising temperature for this quality will be $900\text{--}950^{\circ}\text{C}$ and after having reached this temperature over the entire cross section, the pipes are cooled in still air. Stress relieving temperature is $530\text{--}580^{\circ}\text{C}$.

When quenched and tempered, the pipes are heated to normalising temperature for ca. 30 min. and then cooled in water. Tempering will take place at approx. 620°C for 60 min. and then cooled in still air.

X65 are delivered in Quenched and Tempered condition.

10. Hardness

It is often a requirement that the maximum hardness on any part of the weld is not to exceed ca. 310 HB. By following special welding procedures and taking all necessary precautions as to weld design, thickness, welding process, preheating, consumables, working temperature etc. it should be possible to obtain the max. HAZ hardness. The max. hardness for our modified pipe is 237 HB (22HRC) meeting also the requirement of NACE MR-01-75.

11. Grain size

The grain size of our steel is 8 or finer in accordance with ASTM E 112-85 without special evidence. If evidence should be a requirement then an extra test will have to be performed.

12. Hot and cold forming

Our X52 pipes can easily be both hot and cold formed. Hot forming should take place in the temperature range from 850°C to 1050°C and cooling in air. A normalising treatment after hot forming is only required if the last forming operation is carried out at temperatures outside the range of $850\text{--}950^{\circ}\text{C}$. Regarding cold forming with a high degree of cold working it is generally sufficient with stress relieving after forming unless a normalising treatment is specified in the fabrication specifications.

X65 is made by oxygen process or electric arc furnace, specially desulphurized, fully killed and made to fine grain practice.

13. Welding and flame cutting

The welding technique application, is of fundamental importance to the service performance of the pipes specified. Our steel is weldable by all manual and automatic welding processes. In general no stress relieving is required. It should however be performed if required in the construction specification or if a reduction of the residual welding stress seems advisable. Low hydrogen types of electrodes matching the properties of the parent metal are recommended. Despite the low carbon content and the low carbon equivalent it will always be necessary to preheat to get rid of moisture. No welding should be performed when the surfaces are humid.

14. Tolerances

Tolerances comply with API 5L and ISO 3183 except the end with following amendment

- $t > 25\text{mm}$: OD tolerance $\pm 1\%$; out of roundness is included in OD tolerance.

15. Testing frequency

For the mechanical properties, the following test will be applicable: 1 specimen (and / or set of specimen) per lot according to API spec. 5L. For lots and heat exceeding 40 tons at least 2 specimens.

For the notch bar impact toughness the following test will be applicable: 1 set of specimens with 3 single specimens per lot and per heat as per API.

For the through thickness test for thickness 10mm and above a test will be performed per lot with one set of specimens with 3 single specimens at a time.

16. Hydrostatic test

The hydrostatic test is performed in according to API 5L and ISO 3183.

17. Temporary corrosion protection

The pipes are provided with an external temporary corrosion protection to prevent the pipe from being exposed to rusting during transportation and stocking. It is our experience that if the pipes are to be processed on receipt from the mill, no rust protection is recommended as the removal of new protection may cause problems. Also fittings and flanges are protected during transport and warehousing.

18. Quality assurance

Our company has an approved Quality Assurance System conforming to NS-EN ISO 9001:2015. This means that we are supplying pipe, flanges and fittings from first class producers with a corresponding quality assurance system.

We supply the pipe with certificates in accordance with EN 10204/3.2 and flanges and fittings as per EN 10204/3.1.

19. Marking

Our pipe will be die stamped with a heat no., producer's symbol, quality, U.S. test, symbol of inspection company and API Monogram (wherever feasible) at the end of the pipe, at least 50mm max. 150mm from one end. This marking will be framed with white paint. The fittings and flanges will be die stamped with heat no., producer's symbol, quality, size and pressure rating.

20. Present stock program API 5L X52/X65 Modified - pipes

NPS IN	O.D. MM	W.T. MM	RL- CODE	KG/MT	API-id. SCH.NO	LENGTHS MT
1"	33,4	4,55	11400940	3,24	80	8-12
		6,35	11401000	4,23	160	8-12
1.1/2"	48,3	5,08	11401100	5,4	80	8-12
		7,14	11401200	7,23	160	8-12
		10,16	11401300	9,55	XXS	8-12
2"	60,3	3,91	11401400	5,44	STD/40	8-12
		5,54	11401500	7,48	XS/80	8-12
		8,74	11401600	11,12	160	8-12
		11,07	11401700	13,45	XXS	8-12
		12,7	11401750	15		8-12
		14,2	11401780	16,1		8-12
2.1/2"	73	5,16	11401800	8,62	STD/40	8-12
		7,01	11401900	11,41	XS/80	8-12
3"	88,9	5,49	11402000	11,29	STD/40	8-12
		7,62	11402100	15,27	XS/80	8-12
		11,13	11402200	21,34	160	8-12
		15,24	11402300	27,67	XXS	8-12
		17,5	11402380	28,8		8-12
4"	114,3	6,02	11402400	16,07	STD/40	8-12
		8,56	11402500	22,31	XS/80	8-12
		11,1	11402600	28,3	120	8-12
		13,49	11402700	33,53	160	8-12
		17,12	11402800	41,02	XXS	8-12
		20	11402900	46,5		8-12
		22,2	11402970	50,4		8-12
		25,4	11403000	55,68		8-12
5"	141,3	6,55	11403200	21,78	STD/40	8-12
		9,52	11403300	30,95	XS/80	8-12
		12,7	11403380	40,2	120	8-12
		15,88	11403400	49,11	160	8-12
		19,05	11403450	57,42	XXS	8-12
6"	168,3	7,11	11403500	28,26	STD/40	8-12
		10,97	11403600	42,56	XS/80	8-12
		12,7	11403700	48,73		8-12
		14,27	11403800	54,2	120	8-12
		18,26	11403900	67,56	160	8-12
		21,95	11404000	79,22	XXS	7-11
		25,4	11404100	89,5		6-10
6"		28	11404150	96,9		6-10
		31,8	11404200	107		4-8

NPS IN	O.D. MM	W.T. MM	RL- CODE	KG/MT	API-id. SCH.NO	LENGTHS MT
8"	219,1	6,35	11404400	33,31	20	8-12
		8,18	11404500	42,53	STD/40	8-12
		10,31	11404600	53,1	60	8-12
		12,7	11404700	64,63	XS/80	8-12
		15,88	11404800	79,58		8-12
		19,05	11404900	93,98		8-12
		22,23	11405000	107,92	XXS	8-12
		23	11405060	111,27	160	8-12
		25,4	11405100	121,33		8-11
		28	11405200	132		4-7,5
		31,8	11405300	146,88		4-7,5
10"	273	38,1	11405400	170,06		4-6
		6,35	11405500	41,77	20	8-12
		9,27	11405600	60,31	STD/40	8-12
		12,7	11405700	81,55	XS/60	8-12
		15,88	11405800	100,73		8-12
		19,05	11405900	119,3		8-12
		21,44	11405940	133,04	120	8-12
		25,4	11405970	155,15	XXS/140	8-12
		28,58	11406000	172,33	160	8-10,5
		31,75	11406200	188,97		8-10,5
		35	11406300	205		6-9
12"	323,8	38,1	11406400	220,7		6-9
		45	11406450	253		4-8
		50	11406500	274,96		4-7,5
		6,35	11406540	49,73	20	8-12
		7,14	11406600	55,77		8-12
		9,53	11406700	73,88	STD	8-12
		10,31	11406800	79,73	40	8-12
		12,7	11406900	97,46	XS	8-12
		14,27	11407000	108,96	60	8-12
		15,88	11407100	120,62		8-12
		17,48	11407200	132,08	80	8-12
12"		19,05	11407300	143,21		8-12
		21,44	11407370	159,91	100	8-12
		25,4	11407400	186,97	XXS/120	8-12
		31,75	11407500	228,74		6-10
		33,32	11407600	238,76	160	6-10
		38,1	11407700	268,43		6-9,5
		45	11407900	309,38		4-6,5
		50	11407950	337,6		3-6
		55	11408000	364,57		3-5,5

NPS IN	O.D. MM	W.T. MM	RL- CODE	KG/MT	API-id. SCH.NO	LENGTHS MT
14"	355,6	7,92	11408080	67,9	20	8-12
		9,53	11408100	81,33	STD/30	8-12
		11,13	11408180	94,55	40	8-12
		12,7	11408200	107,39	XS	8-12
		15,88	11408400	133,03		8-12
		19,05	11408500	158,1	80	8-12
		25,4	11408700	206,83		7-11
		31,75	11408800	253,56	140	5-8,5
		35,71	11408850	281,7	160	5-8
		38,1	11408900	298,3		4-7,5
		60	11409000	437,37		3-5
16"	406,4	7,92	11409080	77,83	20	8-12
		9,53	11409100	93,27	STD/30	8-12
		12,7	11409200	123,3	XS/40	8-12
		14,27	11409300	137,99		8-12
		15,88	11409400	152,93		8-12
		16,66	11409470	160,12	60	8-12
		17,48	11409500	167,65		8-12
		19,05	11409700	181,97		7-11
		21,44	11409850	203,53	80	7-10
		25,4	11409900	238,64		6-9,5
		31	11409980	286	120	6-8
		31,75	11410000	293,33		4-7,5
		38,1	11410100	346,03		4-6,5
		61	11410150	520		
		65	11410200	547,23		6-9,5
18"	457,2	7,92	11410270	87,71	20	8-12
		9,52	11410290	105,1	STD	8-12
		12,7	11410300	139,15	XS	8-12
		15,88	11410400	172,74		8-12
		19,05	11410500	205,74	60	8-12
		23,83	11410550	254,67	80	8-12
		25,4	11410600	270,34		8-12
		31,75	11410700	332,95		8-12
		38,1	11410800	393,76		8-12
		45,24	11410820	459,59	160	7-10
20"	508	9,52	11410880	117,15	STD/20	8-12
		12,7	11410900	155,12	XS/30	8-12
		15,1	11410950	183	40	8-12
		15,88	11411100	192,71		8-12
		17,48	11411200	211,44		8-12

NPS IN	O.D. MM	W.T. MM	RL- CODE	KG/MT	API-id. SCH.NO	LENGTHS MT
		19,05	11411300	229,7		8-12
		23,83	11411350	284,52		8-12
		25,4	11411400	302,28		8-12
		26,2	11411450	311		8-12
		31,75	11411500	372,88		8-12
		32,5	11411650	381		8-12
		38,1	11411700	441,49	120	8-12
		50,8	11411760	572,75	160	7-10,5
22"	559	12,7	11411960	171,09	XS/30	8-12
		15,88	11411980	213		8-12
		19,05	11412000	253,65		8-12
		25,4	11412100	334,23		8-12
		31,75	11412200	412,81		8-12
		38,1	11412300	489,41		8-11,5
24"	610	9,52	11412450	141,12	STD/20	8-12
		12,7	11412470	187,06	XS	8-12
		14,27	11412500	209,64	30	8-12
		15,88	11412550	232		8-12
		17,48	11412700	255,41	40	8-12
		19,05	11412800	277,61		8-12
		25,4	11412900	366,17		8-12
		31,75	11413100	452,74		8-12
		38,1	11413200	537,33		7-10,5
		50,8	11413300	700,53		5-8

Lengths

Please note that our double random lengths, may offer advantages with regards to welding costs.

The above dimensions and weights have been adjusted to conform to ANSI / ASME B36.10M - 1985 or API standard 5L.

21. Fittings

The fittings we supply are in accordance with the ASTM A-860 standard specification for high wrought butt welding fittings. The material is supplied in the grade WPHY 52 and is modified to meet the requirements, specified in this brochure for mechanical properties as well as carbon equivalent and impact properties, in accordance to the Norsok Standard.

The fittings are supplied in the normalised or the quenched and tempered condition. Dimensions and tolerances will comply with ANSI B.16.9. and the ends will be beveled in accordance with ANSI B.16.25.

Our current range for these fittings is:

2” – 16” sch.40, sch.160 and sch.XXH.

Other sizes can be fast-tracked from our mills.

22. Flanges

The flanges we supply in accordance with the ASTM material standard A694 F552 or A350 LF2 for forgings. The material is supplied in the grades F52 of LF2 and is modified to meet the requirements specified in this brochure for mechanical properties as well as carbon equivalent and impact properties, meeting the Norsok Standard.

The flanges are supplied in the normalised, normalised and tempered or the quenched and tempered condition.

Dimensions and tolerances will comply with ANSI B.16.5 up to 24” and MSS SP44 from 26” and above.

Our current range for these flanges is:

½” – 24” in 150 lbs, 300 lbs and 600 lbs and
½” – 8” in 1500 lbs.

Other sizes can be fast-tracked from our mills.

SALGS- OG LEVERINGSBETINGELSER	TERMS AND CONDITIONS
1. SALGSVILKÅR Disse salgsvilkår gjelder i sin helhet for alt varesalg fra Rolf Lycke AS ("selgeren"). Salgsvilkårene går foran bestemmelser eller opplysninger som måtte fremkomme i kjøpers ordre eller korrespondanse, med mindre selgeren skriftlig har samtykket i annet. Kjøperen aksepterer disse salgsvilkår ved utstedelse av ordrebekreftelse, salgsavtale, fremsendelse av skriftlig bestilling eller gjennom mottagelse av leverte varer. 2. TILBUD OG AKSEPT Selgerens tilbud er uforpliktende og kan trekkes tilbake eller endres inntil kjøperens skriftlige ordrebekreftelse er mottatt av selger. Ved levering fra lager gjelder tilbudet med forbehold om mellomsalg. 3. PRIS Med mindre annet er skriftlig avtalt gjelder selgerens pris ved avsendelse av varene. Detter gjelder også ved del- eller restleveringer. Prisene er angitt eksklusive mva og gjelder FCA selgerens lager-adresser (Oslo - Stavanger). 4. PRISENDRINGER Dersom offentlige skatter eller avgifter skulle endres, eller nye skatter eller avgifter pålegges, kan selgeren endre prisene tilsvarende frem til leveringsdag. Det tas likeledes forbehold om å justere prisene ved endring i fraktprisen og ved valutakursendringer, pluss legeringstillegg. 5. LEVERINGSTID Oppgitt leveringstid er veiledende hvis det ikke uttrykkelig er angitt i tilbudet at den er garantert. 6. RISIKO FOR SALGSGJENSTANDEN Varen er å anse for levert når den er overgitt til selvstendig transportfører. Risikoen for varen går over på kjøperen når varen er levert. Fra leveringstidspunktet har kjøperen ansvaret for forsikring av varen. 7. EMBALLASJE Emballasjen tas ikke i retur uten særskilt skriftlig avtale. 8. BETALINGSVILKÅR Betaling skal skje innen 30 dager fra fakturadato. Ved overskridelse av betalingsfristen plikter kjøper å betale den til enhver tid gjeldende morarente. Reklamasjon pga. uvesentlige mangler utsetter ikke betalingsfristen. 9. KJØPERS MISLIGHOLD Dersom kjøper ikke har betalt innen 30 dager etter forfall kan selgeren heve avtalen med kjøper samt kreve erstatning for samtlige utgifter som oppstår i anledning av misligholdt avtale, herunder ikke begrenset til transport og lagerfee m.v.. 10. SALGSPANT Selger har salgspant i de solgte varer inntil kjøpesummen i sin helhet med tillegg av renter og omkostninger er fullt betalt (pantelovens § 3-14 flg.). Kjøperen skal holde varen forsvarlig oppbevart og forsikret. Kjøperen har ikke rett til å avhende eller pantsette varen før kjøpesummen er betalt. Ved avhendelse / pantsettelse av varen får kjøpesummen i sin helhet er betalt, trer selgeren inn i de rettigheter og krav kjøperen har mot tredjemann. 11. VARENS SPESIFIKASJON Kjøperen har risikoen for at varen, herunder dens tekniske data, passer til behovet. Angir bestillingen ikke særskilte krav til kvalitet, leveres varene i henhold til sertifikatspesifikasjoner fra selgers leverandør. 12. REKLAMASJONER OG MANGLER Ved mottagelsen må kjøperen straks inspisere varene. Selger er ikke ansvarlig for mangel med mindre kjøper uten ugrunnet opphold etter at mangelen ble oppdaget eller burde vært oppdaget gir skriftlig varsel til Selger. Slikt varsel må være gitt senest 12 måneder etter levering av Leveransen. Tilsvarende tidsfrist gjelder for utskiftede eller reparerte deler av varen, beregnet fra tidspunktet utskiftingene eller reparasjonen fant sted. Ved transportskade skal reklamasjon straks meddeles transportør. Selgeren er uten ansvar for kvantitetsmessige mangler med mindre det er mottatt skriftlig reklamasjon fra kjøper innen syv dager fra leveringstidspunktet. Selskapets ansvar for kvantitetsmessige mangler er begrenset til å foreta etterlevering eller kreditering av det beløp mangelen måtte representere i henhold til faktura. Ved kvalitative feil eller mangler som selgeren er ansvarlig for, forbeholder selgeren seg rett til å avhjelpe mangel eller foreta omlevering innen rimelig tid uten kostnad for kjøper. Selgerens erstatningsansvar overfor kjøper eller tredjemann skal ikke i noe tilfelle overstige varens nettofaktura pris fra selger. Selgeren er ikke under noen omstendighet ansvarlig for indirekte tap. Selgeren fraskriver seg et hvert ansvar for tap, skader eller lignende som måtte være forvoldt av mangelfullt materiell eller arbeid. Selgeren er heller ikke ansvarlig for feil, mangler eller forsinkelser som er forårsaket av forhold på kjøpers side eller forhold selgeren ikke har kontroll over, som blandt annet ved: - vanlig slitasje - uriktig anvendelse eller betjening av varen - mangelfullt vedlikehold, montering, reparasjoner eller modifisering utført av andre enn selgeren 13. RETUR Retur av varen kan kun skje etter forutgående skriftlig avtale med selger. Varer som ikke er standard lagervare tas bare i retur dersom returret videre til selgerens leverandør foreligger. Sistnevntes returgebyr, samt eventuelle ekstra omkostninger kommer da i tillegg til selgerens returgebyr. 14. FORCE MAJEURE a. Ingen av partene skal anses å ha misligholdt sine forpliktelser etter denne avtale i den utstrekning han kan godtgjøre at overholdelse av dem er blitt forhindret på grunn av force majeure. b. Den part som vil påberope seg force majeure skal straks gi den annen part skriftlig varsel om en slik situasjon. c. Hvis en force majeure situasjon fortsetter uten avbrudd i 30 dager eller mer, skal hver av partene ha rett til å heve avtalen ved å gi skriftlig varsel til den annen part. Kjøper kan, ved heving fra selgers side, kreve å få utlevert kjøpsgjengenstanden i den tilstand den er i hevingstidspunktet, mot å betale en forholdsmessig del av kjøpesummen. 15. ENDRING AV AVTALEN Enhver endring eller tilføyelse til avtalen skal skje skriftlig. 16. TVISTER Enhver tvist som måtte oppstå mellom partene i forbindelse med denne avtale og derav følgende rettsforhold, skal avgjøres etter norsk rett ved de alminnelige domstoler. Ved søksmål anses selgerens verneting som vedtatt av begge parter.	1. TERMS AND CONDITIONS These conditions apply in full to all sales of goods from Rolf Lycke AS ("vendor"). Vendor's terms and conditions precede terms and conditions or information which may appear from the buyer's order or correspondence, unless the vendor has confirmed otherwise in writing. The buyer accepts these terms and conditions by issuing an order in writing or by receiving the goods. 2. QUOTES AND OFFERS Vendor's quotes and offers are free from obligations and can be withdrawn or changed until written order confirmation has been received by vendor. Sales from stock are subject to availability. 3. PRICES Unless otherwise is agreed in writing, vendor's prices at the time of that the goods are dispatched shall prevail. This also applies to part deliveries or deliveries which remain to be delivered. All prices are FCA vendor's warehouse addresses (Oslo-Stavanger), excluding sales tax/VAT. 4. PRICE ADJUSTMENTS Vendor may, in the event of changes in taxes, duties, tariffs, customs, change prices accordingly - until delivery date. Vendor may furthermore adjust prices in the event freight/forwarding/foreign exchange and alloy surcharges change. 5. TIME OF DELIVERY The stipulated time of delivery is for information only, unless vendor has made a specific guarantee in writing. 6. PASSING OF RISK, SHIPMENT The goods are considered to be delivered when they are handed over to independent agent/carrier. Buyer assumes risk when the goods are delivered. Buyer is responsible for the insurance of the goods from the time of delivery. 7. PACKING Packing material is not returnable, unless agreed upon, in writing. 8. PAYMENT Payment shall be made within 30 days from date of invoice. Late payment will result in interest charges, calculated from due date. Any claims by buyer due to deficiencies which are not considered a material breach of contract do not postpone the due date. 9. BUYER'S DEFAULT If buyer has not paid within 30 days of the due date, the vendor is entitled to terminate the contract and to claim compensation for all expenses deriving from the buyer failing to fulfill their obligations according to contract. This is not limited to transportation and warehousing costs. 10. RETENTION OF TITLE The goods shall remain vendor's property until all vendors' claims against buyer, including applicable interest, have been settled (Ref. Norwegian Law: Section3-14 and so on in Mortgages and Pledges Act.) Buyer must ensure that goods are adequately stored and insured. Buyer cannot re-sell goods until vendor has received full payment. Upon buyer's sale/mortgaging of the goods before vendor has received full payment, the vendor enters into the rights and claims of the buyer against any third party. 11. SPECIFICATIONS OF GOODS Buyer is responsible for and must ensure that goods and technical data meet all requirements for their intended use. In the event vendor does not receive any specifications of standards or quality, the goods will be delivered according to certificates issued by vendor's suppliers. 12. CLAIMS AND INSPECTION OF GOODS Buyer must immediately inspect the goods upon receipt. Seller shall not be liable for defects unless buyer has issued a written notice of the defect without undue delay following discovery of the defect, or after it ought to have discovered it, and in no event later than 12 months after delivery. The time limit also applies to replaced or repaired parts of the goods, calculated from the time of replacement or repair. Damage incurred during transport must be claimed immediately with forwarding agent/carrier. Vendor is not liable for insufficient quantity, unless vendor has received a written claim from buyer, no later than 7 days form delivery. Vendor's liability for failing to deliver correct quantities is limited to delivering remaining items or issuing a credit against paid invoice. Vendor shall, at vendor's discretion free of charge and within reasonable time either repair or replace defective goods. Vendor's liability for buyer or third party will under no circumstances exceed vendor's net invoiced price. Vendor is under no circumstances responsible for consequential losses. Vendor waives any liability for loss, damage or similar which may be caused by defective material or workmanship Vendor is not liable for errors, defects or delays caused by circumstances attributable to buyer or circumstances the vendor is not in control of, such as in case of: - Wear & tear - Incorrect use or operation of the goods - Insufficient maintenance, installation, repair or modifications, not carried out by vendor. 13. RETURNING GOODS Returning of goods is subject to prior written agreement with vendor. Non-stock items will not be taken back, unless vendor's supplier agrees to take the relevant goods in return. A cancellation charge will apply to all returned material, which includes return charges from the vendor's supplier in addition to any possible additional costs and vendor's own return charges. 14. FORCE MAJEURE a. Neither party shall be deemed to have breached its obligations under the contract to the extent that it can be proven that fulfillment has been prevented due to Force Majeure. b. The party that claims Force Majeure must notify the other party immediately in writing. c. In the event a Force Majeure situation is lasts continuously beyond 30 days or more, either party may terminate the order by giving notice to the other party in writing. Buyer may in the event vendor terminates the order demand delivery of the goods in its present stage of manufacture, subject to proportionate price adjustments. 15. AMENDMENTS Any change or adjustment to order shall be done in writing. 16. DISPUTES / APPLICABLE LAW Any dispute between the parties resulting from this agreement shall be governed by Norwegian Law. In case of lawsuit, vendor's legal venue is deemed to be agreed between the parties.

Catalogues from Rolf Lycke AS

- **Mechanical tubes / Hollow Bar**
Carbon, low temperature and stainless steel
- **Seamless steel pipe in API 5L X52/X65 Mod**
For offshore applications
- **Offshore Reference Guide**
Offshore products available from Rolf Lycke AS,
which include technical specifications,
drawings etc.
- **Catalogue for food, beverage, pharmaceutical
and processing industry**
Stainless steel

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