

ΑΝΤΟΧΗ/ΑΣΦΑΛΕΙΑ/ΠΟΙΟΤΗΤΑ | STRENGTH/SAFETY/QUALITY



**ΑΦΟΙ Θ. ΝΙΚΟΛΑΪΔΗ Α.Β.Ε.Ε.
ΣΩΛΗΝΟΥΡΓΕΙΑ
ΓΑΛΒΑΝΙΣΤΗΡΙΑ**

**NIKOLAIDIS TH. BROS S.A.
STEEL PIPES INDUSTRY
GALVANIZING PLANT**



ΑΝΤΟΧΗ/ΑΣΦΑΛΕΙΑ/ΠΟΙΟΤΗΤΑ

STRENGTH/SAFETY/QUALITY

The company



Production Plant



Offices-Warehouse



Production Line

The company was founded in 1963 in Stavroupolis, Thessaloniki and its field of activities was the production and rolling of steel pipes and hollow sections.

In 1972, the production facilities move from Stavroupolis, Thessaloniki to the 16th Km of Thessaloniki-Serres national road. The new premises have a total roofed area of 15,000 m² and production of galvanized water supply pipes is added.

In 1985, the company opens offices and customer service warehouses at the 5th Km of Thessaloniki-Lagadas road of a surface of 2,000 m².

In 1989 the company passes to Pavlos Nikolaidis who makes it a leader in the field.

In 2007 the company passes to his son, Stavros Nikolaidis who still leads the company.

The quality and reliability of products and services have confirmed the company's leading position in the field and ISO 9001:2008 certification proves this even better.

The company plays a key role in the greek market and in 2009 it installs two new VAI-SEUTHE production lines in order to expand its range of products entering natural gas field and at the same time ameliorating the quality of its products. The company also proceeds to expand its premises with two new wings.



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Environment

Green enterprise is a target and a priority. The investment realized in 2009-2010 with the installation of pipe forming machines has reduced the use of energy resources and mineral oil. Today, each meter of pipe produced requires less electric energy and produces less waste.

Surface treatment of metal is a tricky and complex procedure which involves various chemical processes producing waste. From the first day of operation of the galvanizing plant a waste treatment unit was installed and no liquid waste is freely disposed of to the environment (Recycling)

Nevertheless, modern technology can completely eliminate waste and this is our target and the next steps in our course for constant upgrading and modernization.

Since 2009, the company utilizes Optimum Available Techniques in conformity with European Directives. The company also has ISO 14001 certification for Environmental Management.



Health & Safety



Health and safety of our employees is a priority for the company. We undertake great efforts to improve not only safety but also ergonomy.

To this end, we have carried out identification, assessment and control of health risks in the working environment, in order to minimize the exposure of our staff to those risks.

We have identified potential risks (natural, chemical, biological, ergonomic) that could potentially pose a risk for the health of our employees and we proceed daily to confront them.

We have developed a detailed plan on identification and control of risk factors, we have adopted all necessary measures in order to reduce or control potential risks and we have determined obligations and responsibilities for each work position.

We continuously train and inform our personnel on Health and Safety issues. Among the future plans of our company lies an Integrated System of Health and Safety Management of employees according to National and European Standards.

Among the first priorities of “Nikolaidis Th. Bros S.A.” is to provide services that meet the needs and fulfill the expectations of its customers.

Enjoying a long experience in the field and possessing all necessary means in terms of technical infrastructure and human resources, the organization and operation of the company is governed by the Quality Management System ISO 9001:2008.

All sections and shops of the company undertake the responsibility to follow, assimilate and implement the procedures called for by the Quality Management System, through their daily activities and training by the company.

The main concern of the Company is to make sure that the Quality Policy is implemented, aiming to the continuous, constant development of its entrepreneurial activities, remaining committed to its principles, offering to its customers optimal and of continuously improving quality services and products.

The afore mentioned goals are monitored and enhanced through personnel training programs, regular revisions by the administration and internal control procedures, during which data from the Quality files are processed and actions for further improvement are clearly defined.

Company Certificates



EN ISO 9001:2008
Quality Assurance Certificate

ELOT EN 10255 Standard
Declaration of Conformity for natural gas pipes

CE Standard EN 10219
Certificate for Constructions Steel

ELOT EN ISO 14001:2004
Environmental Management System Certificate

Products Quality Control

Each and every millimeter of pipe produced by “Nikolaidis Th. Bros S.A.”, is checked as regards quality, strength and reliability.

The most demanding challenges in modern materials testing are applied, using equipment that performs automatic testing through electromagnetism, a procedure known as EDDY CURRENT TESTING.

More specifically, an electromagnetic testing machine has been installed in the pipe making lines which automatically detects every fault, such as a hole, “open” weld, deviations in size, deformations etc.

Following the detection of a fault, the device displays details on a screen and then gives a command for the faulty product to be rejected.

Continuous testing in the production line assures optimum quality in the products of the company.

It is worthwhile mentioning that according to the internal procedures of the company, all products are regularly submitted to laboratory testing, in external laboratories certified by Hellenic Accreditation System.



Water Supply Steel Pipes

Electric Resistance Welded water supply pipes



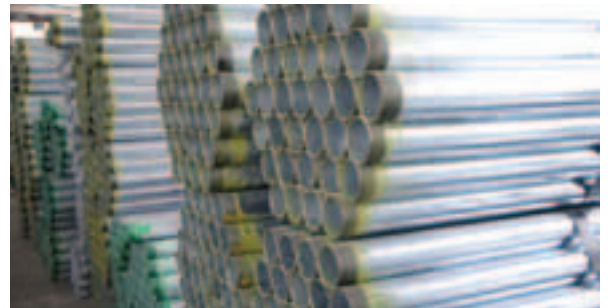
These pipes are produced from a steel plate which is gradually shaped to form a cylinder. The edges are welded through compression and high frequency current, a procedure that leads to the final form of a pipe without the use of added welding material. Then the welding zone is cleaned both externally and internally and checked with ultrasound in order to verify the welding and also the diameter, the thickness and the surface of the pipe.

During all stages of the production process, the pipes are subjected to a series of tests and inspections in order to completely assure their quality and reliability, according to international quality standards.

These tests are conducted electromagnetically, through mechanical, chemical and hydraulic tests. These pipes are used for liquid supply. They are classified by their thickness to yellow (Normal/Standard), red (Heavy Type) and green (Ultra-heavy Type). Pipes with a red label are produced on demand and there is no stock available.

Galvanized Water Supply Pipes

They are galvanized following EN 10240 standard. They have a taper male threading at the edges.



Black Water Supply Pipes

They are used for liquids, wherever there is no requirement for galvanized pipes.

Surface protection against oxidation with the use of black, Bitulak dye. They have a taper male threading at the edges.



TECHNICAL PROPERTIES OF GALVANIZED AND BLACK PIPES

STANDARD			ISO RED			ISO MEDIUM		
D	T	WEIGHT Kg/m	D	T	WEIGHT Kg/m	D	T	WEIGHT Kg/m
1/2"	2,00	0,95	1/2"	2,30	1,08	1/2"	2,60	1,21
3/4"	2,30	1,39	3/4"	2,30	1,39	3/4"	2,60	1,56
1"	2,60	1,98	1"	2,90	2,20	1"	3,20	2,41
1 1/4"	2,60	2,54	1 1/4"	2,90	2,82	1 1/4"	3,20	3,10
1 1/2"	2,90	3,24	1 1/2"	2,90	3,24	1 1/2"	3,20	3,56
2"	2,90	4,08	2"	3,20	4,49	2"	3,60	5,03
2 1/2"	3,20	5,73	2 1/2"	3,20	5,73	2 1/2"	3,60	6,42
3"	3,20	6,72	3"			3"	4,00	8,53
4"	3,60	9,75	4"			4"	4,50	12,20

Thickness tolerance: -12,5%

«Nikol Gas» Steel Pipes for Natural Gas

Electric Resistance Welded Pipes for Natural Gas to EN 10255

These pipes are produced from a steel plate which is gradually shaped to form a cylinder. The edges are welded through compression and high frequency current, a procedure that leads to the final form of a pipe without the use of added welding material. Then the welding zone is cleaned both externally and internally and checked with ultrasound in order to verify the welding and also the diameter, the thickness and the surface of the pipe.

During all stages of the production process, the pipes are subjected to a series of tests and inspections, in compliance to EN 10255 standards (for UHT Pipes) in order to completely assure their quality and reliability, according to international quality standards.

- Reaction to fire
- Test of mechanical properties
- Tensile strength test
- Chemical composition
- Creep test
- Hydrostatic test.

These tests are conducted electromagnetically, through mechanical, chemical and hydraulic tests.



Galvanized Natural Gas Steel Pipes to EN 10255



Galvanized to EN 10240 standard. For galvanization of pipes that will be used in natural gas applications, at the end of the galvanization process the pipes pass through a "ring" device that blows hot air. This procedure assures surface smoothness and prevents surface faults. They have a taper male threading at the edges.

Black Steel Pipes to EN 10255

Black Steel Water Supply Pipes can be used for the supply of gases and liquids, wherever safety and resistance to corrosion requirements are low.

They come with or without a taper male threading at the edges.



CHEMICAL COMPOSITION AND MECHANICAL PROPERTIES

CHEMICAL COMPOSITION %				MECHANICAL PROPERTIES		
C max	Mn max	P max	S max	Yield Strength ReH min (Mpa)	Tensile Strength Rm (Mpa)	Elongation A min %
0.20	1.40	0.035	0.030	195	320 to 520	20

C= Carbon | Mn= Manganese | P= Phosphor | S= Sulfur

DIMENSIONS/TOLERANCES IN DIAMETER AND WEIGHT

Nominal Outside Diameter	Derived Outside Diameter mm	Thread R	Outside Diameter		Thread Thickness (mm)	Mass per unit length of bare pipe	
			Max (mm)	Min (mm)		Simple edges (Kg/m)	Threads & Pipe joint (Kg/m)
15	21.3	1/2	21.8	21.0	2.6	1.21	1.22
20	26.9	3/4	27.3	26.5	2.6	1.56	1.57
25	33.7	1	34.2	33.3	3.2	2.41	2.43
32	42.4	1 1/4	42.9	42.0	3.2	3.10	3.13
40	48.3	1 1/2	48.8	47.9	3.2	3.56	3.60
50	60.3	2	60.8	59.7	3.6	5.03	5.10
65	76.1	2 1/2	76.6	75.3	3.6	6.42	6.54
80	88.9	3	89.5	88.0	4.0	8.36	8.53
100	114.3	4	115.0	113.1	4.5	12.20	12.50

TOLERANCES

PIPE CURVATURE	Tolerance in curvature is contained in diameter tolerance
THICKNESS	(+)(-) 10%
WEIGHT	(+)(-) 7.5% for quantities of more than 10 tons
WELDING	The outside welding bead must lie at a practically level line
	The height from the internal weld seam cannot exceed 60% of derived wall thickness

OTHER STANDARDS

GALVANIZATION	EN 10240
THREAD	EN 10226 - 1 Taper

«Nikol Piro» Steel Pipes for Fire Safety

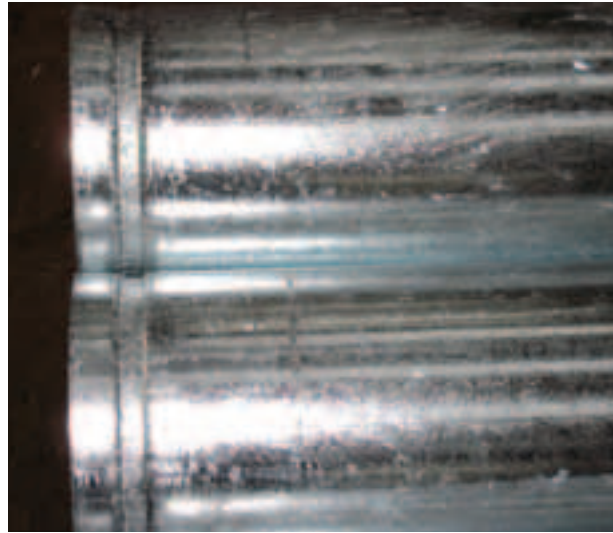
Electric Resistance Welded pipes for Fire Safety to EN 10255

These pipes are produced from a steel plate which is gradually shaped to form a cylinder. The edges are welded through compression and high frequency current, a procedure that leads to the final form of a pipe without the use of added welding material.

Then the welding zone is cleaned both externally and internally and checked with ultrasound in order to verify the welding and also the diameter, the thickness and the surface of the pipe.

During all stages of the production process, the pipes are subjected to a series of tests and inspections, in order to completely assure their quality and reliability, according to international quality standards.

These tests are conducted electromagnetically, through mechanical, chemical and hydraulic tests. These pipes are used for liquid supply. They are classified by their thickness to yellow (Normal/Standard), red (Heavy Type) and green (Ultra-heavy Type). Pipes with a red label are produced on demand and there is no stock available.



Galvanized Steel Pipes for Fire Safety to EN 10255



Galvanized Steel Pipes for Fire Safety are used in fire safety networks for water supply under high pressure. The edges of these pipes do not have a thread, they have a groove and joining is effected with the use of a special clamp/joiner.

Black Steel Pipes for Fire Safety to EN 10255

Black Steel Pipes for Fire Safety are used for water supply networks. The edges of these pipes have a groove and joining is effected with the use of a special clamp/joiner.

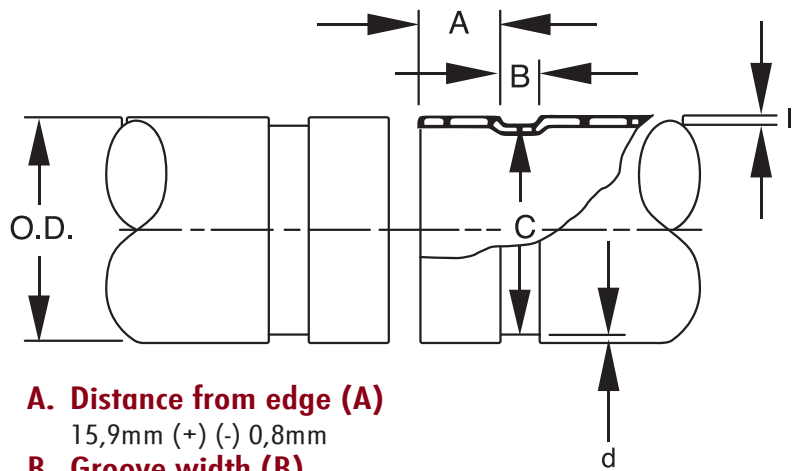
Surface protection against oxidation with the use of black, Bitulak dye.



Groove Details for EN 10255 Steel Pipes for Fire Safety

DIMENSIONS/TOLERANCES IN DIAMETER AND WEIGHT

Nominal Outside Diameter	Derived Outside Diameter mm	Thread R	Outside Diameter		Thread Thickness (mm)	Mass per unit length of bare pipe	
			Max (mm)	Min (mm)		Simple edges (Kg/m)	Threads & Pipe joint (Kg/m)
50	60.3	2	60.8	59.7	3.6	5.03	5.10
65	76.1	2 1/2	76.6	75.3	3.6	6.42	6.54
80	88.9	3	89.5	88.0	4.0	8.36	8.53
100	114.3	4	115.0	113.1	4.5	12.20	12.50

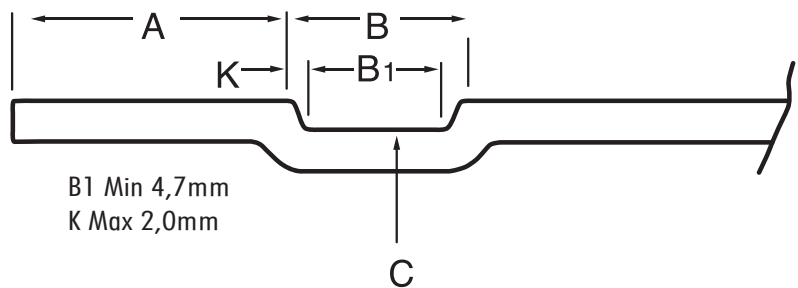


A. Distance from edge (A)

15,9mm (+) (-) 0,8mm

B. Groove width (B)

8,7mm (+) (-) 0,8mm



B1 Min 4,7mm
K Max 2,0mm

Pipe Size	A	B	B1 Min.	K Max.
50 - 150	15.9 ± 0.8	8.7 ± 0.8	4.7	2.0
2" - 6"	0.625 ± 1/16"	0.344 ± 1/16"	0.185"	0.079"

Steel Pipes for Constructions

Straight Seam Welded Pipes - (ERW) Electric Resistance Welded pipes

These pipes are produced from a steel plate which is gradually shaped to form a cylinder. The edges are welded through compression and high frequency current, a procedure that leads to the final form of a pipe without the use of added welding material.

Then the welding zone is cleaned both externally and internally and checked with ultrasound in order to verify the welding and also the diameter, the thickness and the surface of the pipe.

During all stages of the production process, the pipes are subjected to a series of tests and inspections, in order to completely assure their quality and reliability, according to international quality standards.



Galvanized Steel Pipes for Constructions



Galvanized Steel Pipes for Constructions are produced using S235JR Hot Rolled for thickness greater than 2.00 mm and DC01 Cold Rolled for thicknesses less than 1.5 mm.

After the pipes are formed, they are hot dip galvanized in a molten zinc pool and they acquire a long lasting protection against oxidation.

Steel Pipes for Constructions Unpainted

Steel Pipes for Constructions are produced using S235JR Hot Rolled for thickness greater than 2.00 mm and DC01 Cold Rolled for thicknesses less than 1.5 mm.

SIZE		THICKNESS (mm)					
in	mm	2	2,5	3	4	5	6
1/2	Ø21	0,95	1,16	1,35			
3/4	Ø26	1,23	1,50	1,77			
1	Ø33	1,56	1,92	2,27			
	Ø38	K.П.	K.П.	K.П.			
1 ^{1/4}	Ø42	1,99	2,46	2,91			
1 ^{1/2}	Ø48	2,28	2,82	3,35			
	Ø51	K.П.	K.П.	K.П.			
2	Ø60	2,88	3,56	4,24			
	Ø63,5	K.П.	K.П.	K.П.			
	Ø68	K.П.	K.П.	K.П.			
	Ø70	K.П.	K.П.	K.П.			
	2 1/2	Ø76	3,65	4,54	5,41	7,11	8,77
3	Ø88	4,29	5,33	6,36	8,38	10,30	12,30
	Ø95	K.П.	K.П.	K.П.			
4	Ø102	4,91	6,11	7,29	9,63	11,90	14,10
	Ø114		6,89	8,23	10,90	13,50	16,00
	Ø127	6,23	7,77	9,30	12,31	15,23	18,13
	Ø152		9,36	11,19	14,82	18,40	21,95
	Ø168			12,22	16,17	20,10	23,97

- Theoretical kg per meter.
- D127, D152, D168 are delivered unpainted.
- Can be delivered to requested length.

* K.П. On demand.

Hollow Sections



Square and rectangular hollow sections have become increasingly popular as a structural material in comparison to other steel products. Due to their technical characteristics, even the most complex structures can be constructed and they have a major advantage of reduced weight in comparison to conventional sections.

Apart from their technical advantages, hollow sections are increasingly used for their overall aesthetic characteristics. Hollow sections are used in visible parts of constructions and their vast range of dimensions offers a wide field of applications.

Square sections

SIZE (mm)		THICKNESS (mm)					
		2	2,5	3	4	5	6
20	20	1,05					
25	25	1,36	1,67				
30	30	1,68	2,03	2,36			
40	40	2,31	2,82	3,30	4,20		
50	50	2,93	3,60	4,25	5,45	6,56	
60	60	3,56	4,39	5,19	6,71	8,13	
70	70	4,36	5,17	6,13	7,97	9,70	11,33
80	80	4,98	5,96	7,07	9,22	11,30	13,20
90	90	5,57	6,97	8,01	10,50	12,80	15,10
100	100	6,23	7,75	8,96	11,70	14,40	17,00
120	120			10,80	14,20	17,50	20,70
130	130				16,08	20,70	24,50

Rectangular Sections

SIZE (mm)		THICKNESS (mm)					
		2	2,5	3	4	5	6
40	20	1,68	2,03	2,36			
50	30	2,31	2,82	3,30			
60	30	2,79	3,47	4,12			
60	40	2,93	3,60	4,25			
70	30	2,93	3,60	4,25			
70	38	3,34	4,18	5,02			
80	40	3,56	4,39	5,19	6,71	8,13	
100	40	4,36	5,17	6,13	7,97	9,70	
100	50	4,47	5,56	6,60	8,59	10,50	
100	60	4,98	5,96	7,07	9,22	11,30	13,20
120	40			7,07	9,22	11,30	
120	60			8,01	10,50	12,80	15,10
120	80			8,96	11,70	14,40	17,00
150	50			8,96	11,70	14,40	
150	100				14,90	18,30	21,70

- Theoretical kg/m.
- Can be delivered to requested length.

Characteristics of Profiles

Profiles are produced using Cold Rolled DC01 steel.

SQUARE PROFILES

SIZE (mm)		THICKNESS (mm)		
		0,90	1,25	1,50
14	14	0,37	0,50	0,55
17	17	0,45	0,62	0,69
20	20	0,54	0,74	0,82
25	25	0,68	0,93	1,04
30	30	0,82	1,13	1,26
35	35	0,96	1,32	1,48
38	38	1,05	1,44	1,61
40	40	1,10	1,52	1,70
50	50	1,39	1,91	2,14

RECTANGULAR PROFILES

SIZE (mm)		THICKNESS (mm)		
		0,90	1,25	1,50
16	10	0,34	0,46	0,51
20	14	0,45	0,62	0,69
30	15	0,61	0,83	0,93
30	20	0,68	0,93	1,04
38	20	0,79	1,09	1,21
27	40	0,92	1,27	1,41
30	40	0,96	1,32	1,48
50	25	1,03	1,42	1,59
50	20	0,96	1,32	1,48
50	30	1,10	1,52	1,70
60	20	1,10	1,52	1,70
50	40	1,25	1,72	1,92
60	30	1,25	1,72	1,92
60	40	1,39	1,91	2,14
70	30	1,39	1,91	2,14
70	38	1,50	2,07	2,31
80	40	1,67	2,31	2,58

ROUND PROFILES

SIZE (mm)	THICKNESS (mm)		
	0,90	1,20	1,50
Ø21	0,48	0,63	0,7
Ø26	0,58	0,75	0,94
Ø33	0,72	0,96	1,04
Ø38	0,93	1,13	1,41
Ø42	0,85	1,24	1,55
Ø48	0,93	1,43	1,79
Ø60	1,07	1,78	2,23
Ø70		2,07	2,59

- Theoretical kg/m.
- Can be delivered to requested length.



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