







STAINLESS STEEL FLAT PRODUCTS PRODUCT CATALOGUE



## The Arvedi Group

In 1963 Giovanni Arvedi founded his first two companies for the manufacture and trade of carbon steel welded tubes.

In the 1980s, needing to ensure regular procurement of high-quality raw materials, it began the design and construction of the group's own state-of-the-art steelworks, Acciaieria Arvedi, using original and competitive process technology, studied, developed and patented worldwide under the name Arvedi ISP and ESP.

In 2022 Arvedi acquired from ThyssenKrupp the company AST Terni, a leader in the production of special steels, with an important investment plan which aims to expand production and achieve decarbonisation through the application of the main concepts of the circular economy. The Arvedi Group has taken on a leading role in Europe in the field of environmentally compatible steelmaking and includes a series of operations ranging from primary products, such as steel and hot rolled coils, to finished products in the form of re-rolled precisions strip, tubes and stainless steel forged products. Today the Arvedi Group operates in the production of hot rolled carbon and stainless steel coils, carbon and stainless steel tubes, the precision re-rolling of stainless steel strip and in the trading of steel products. All the Group companies have been conceived with a view to specialisation, optimised as regards production organisation and plants, with state-of-the-art technology and inhouse operating practices designed to improve efficiency, quality and flexibility. Highly qualified and competent management guiding a lean and flexible organisation ensures maximum production and quality efficiency as well as a high level of service with particular attention to market developments and requirements. The technological, ergonomic and ecological choices made allow the group to operate fully respecting man and the environment.

## The Holding Company and the Group's industrial structure

Finarvedi is the holding company of the Arvedi Group, the core business of which is composed of steelmaking operations with volumes of over 6 million tonnes of products characterised by high quality and destined for the most demanding markets. The Arvedi Group has about 6000 employees and revenues of about 7 billion Euro. The recent acquisition (January 2022) of AST Terni has given the Group an important role also in the primary steelmaking sector for stainless steel and has contributed to growth in volumes and revenues.

The companies already present in the Group — ILTA Inox and Arinox — will be able to exploit the synergies arising from the presence of AST, a manufacturer of raw materials in the form of coils.



Arvedi

## Arvedi AST: a new integrated company, a new force on the market, with a stainless passion for steel.

In 1884 Terni became part of steelmaking history: the town was chosen as the location for the biggest industrial complex in the recently united Italy to be called "Società Alti Forni, Fonderie e Acciaierie di Terni", founded on the basis of the project by Admiral Benedetto Brin in collaboration with the Venetian businessman Vincenzo Stefano Breda. Thus came into being a steel works that was unique in Italy and became the symbol of the turning point for modern Italian industry of the time. With over 135 years of experience, Arvedi AST, part of the Arvedi Group, is one of the most important integrated steelmaking sites in Europe in the stainless steel sector. Its core business is stainless steel flat products, for which it is market leader in Italy and one of the four leading producers in Europe. As well as flat rolled steel, the company also produces forgings in special steels, among the largest in the world, through its

Forgings Division. Tubificio di Terni, the Arvedi AST controlled company, deals with the production of ERW stainless steel tubes. Thanks to the service centres Terninox, AST Deutschland and AST Turkey located in Italy, Germany and Turkey, the experience, expertise and innovative capacity of its technical and commercial teams, ArvediAST products reach customers all over the world.





HIGH QUALITY PRODUCTS SOLUTIONS IN LINE WITH CUSTOMER NEEDS RESPONSIBLE PRODUCTION WE INVEST TODAY TO DESIGN TOMORROW

green company

# Stainless steel expertise and innovation in processes, products and services

The production plants are concentrated in Terni in an area of over 1.5 million square metres and cover the complete manufacturing cycle, from melting, rolling and finishing to packing. Equipped with the most advanced technologies, ArvediAST produces about one million tonnes of stainless steel flat products per year. Our factory produces semi-finished (Black coils) hot rolled and cold rolled austenitic, ferritic stainless steel products, with different dimensions and finishes to meet customer needs and expectations. The quality of products and services have led our stainless steel to be the raw material of excellence in several market sectors. In fact, each grade of stainless steel presents considerable differences in terms of chemical composition, mechanical properties and corrosion resistance, cold forming and weldability.

Thanks to its Finishing Centre, ArvediAST is able to offer a wide range of surface finishes to improve the product's aesthetics and technical

functionality. Various processes are also carried out including longitudinal and cut-to-lenght to supply the product according to the specific dimensions requested by the customer. The wide range is complemented by the support of an integrated team of technicians to provide solutions and maximum reliability.

The management and organisation approach followed by ArvediAST is based on safety, quality and continuous improvement which is taking the company to explore new and wider markets, guided by the logic of adopting leading innovation and process technologies based on independent R&D (collaboration with the Centro Sviluppo Materiali -CSM RINA, one of the leading Italian Centers for research in the fields of materials). The high level of quality of ArvediAST's products is the result of a combination of key factors: system state-of-the-art technology, the level of equipment and laboratories, and in particular the contributions of highly qualified, specialised engineers.



## SDF

Forgings Division, with a production unit which covers an area of 120,000 square metres, manufactures a wide range of forged artefacts, made from high quality steels, produced according to a century of metallurgical experience updated with the most modern processing techniques.



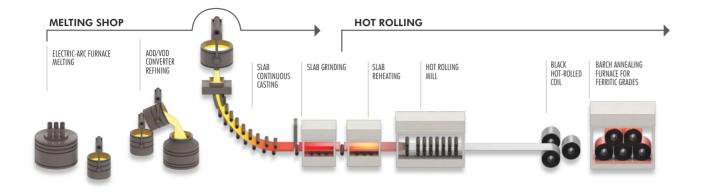
The controlled company, Tubificio di Terni, that occupies an area of 45.000 sqm, is leader in the manufacture of ERW stainless steel tubes. The company is considered worldwide the primary specialist for the automotive, building and urban furnshing industries.

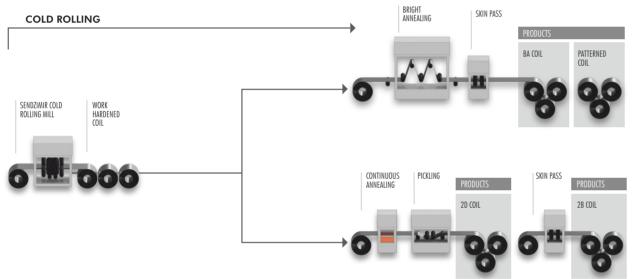


## **PLANTS AND PRODUCTS**



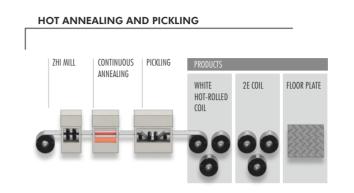
## **INTEGRATED PRODUCTION SITE UNIQUE IN THE WORLD**

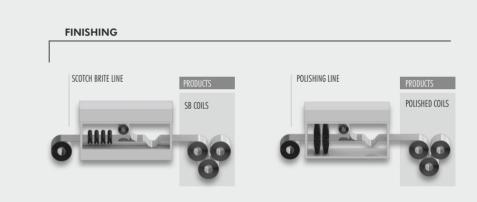


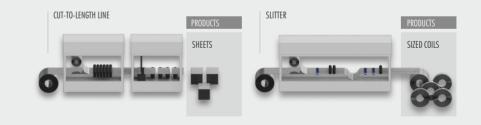


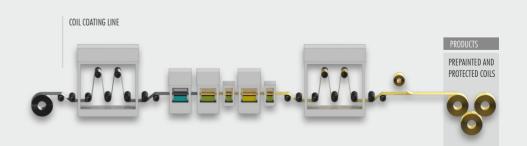
## **Efficiency of the production processes**

Our customers can count on high production efficiency: we utilise a fully integrated production process. All stages of the process are carried out at the Terni site, from casting in a steel mill to surface processing carried out at the Finishing Centre to provide tailor-made solutions. Our processes are constantly monitored and certified.









Arvedi



Innovation is found in the production processes, in packaging, in logistics; it is the link with our customers to create cutting-edge products and services. The collaboration with the Centro Sviluppo Materiali (CSM RINA), one of the leading Italian centres for research in the field of materials, ensures excellent quality standards worldwide.

Arvedi AST started to build the history of Italian steelmaking over 135 years ago; today it has become the factory of the future with the new mission: to be a partner of companies from all over the world, offering each of its customers a wide range of efficient and quality products and solutions with the added value of a "responsible" production, strenghten by the new investments.

"The Spirit gives you the strength to innovate and see something that doesn't exist yet. Then technique and technology intervene. It is the moment in which the Spirit confronts reality and gives substance to innovation. Everything comes from something that you imagine doesn't exist yet. Even in the face of the greatest challenges, man always surpasses himself"

Cav. Giovanni Arvedi



## EXPERIENCE, INNOVATION, SUSTAINABILITY: VISION OF TOMORROW



## SUSTAINABILITY AND ENVIRONMENTAL AWARENESS

Issues relating to safety, health and the environment are deeply rooted in the philosophy and core business of AST as well as in all companies of the Arvedi Group. Arvedi AST undertakes to ensure safe and healthy working conditions and environments for its employees and associates, aimed at their physical and moral integrity that respect individual dignity. The Company adopts and maintains appropriate management systems aimed at identifying and preventing any risk situations, implementing suitable measures in order to ensure the health and safety of all personnel and safeguard the environment.

The constant improvement of technologies, research and innovation, results in products with a high degree of environmental

compatibility and a significant reduction in the environmental impacts of industrial activities. A responsible approach that translates into the implementation of guidelines and behavioural practices dictated by national and international "best practices", with the aim of meeting the highest quality standards. Attention to the environment has always represented an absolute priority for Arvedi AST, to the point the Company has developed an approach aimed not only at respecting the various parameters required by legislation, but also at the implementation of more restrictive environmental self-regulation criteria than those required by current regulations. The increased focus on the issue of environmental sustainability of economic activities has raised sensitivity towards the improvement of risk indicators and laid the foundations for the implementation of a monitoring and planning system for ecological interventions. The company has certified its environment management system according to ISO 14001, also focusing on environmentally friendly energy management. The investments in recent years dedicated to environmental projects guarantee sustainable processes. The presence and use of the railway in the handling of goods, which transports large quantities of materials by rail, is a further indicator of Arvedi AST's commitment to the environment.



A pioneering circular economy project in Europe

URBAN RE-GENERATION A district for sustainability, circular economy and urban regeneration in the Terni area



HIGH QUALITY PRODUCTS SOLUTIONS IN LINE WITH CUSTOMER NEEDS RESPONSIBLE PRODUCTION



**PRODUCT PORTFOLIO** 





## **Product portfolio**

A complete range of stainless steel grades

		AU	ISTEN	ITIC																			
						СН	ROME N	ICKEL							CHROMI MOLYBI	E NICKEL DENUM			HE	AT RESIST	TANT		
ACCIAI SPECIALI TERNI		301	301 L	304	304 L	304 DL	304 MSA	304 MS	304 PSA	304 PS	30	04 PSQ	321	316	316 L	316 SLD	316 Ti	304 H ****	309 S *****	310 S *****	321 H *****	4828 ****	**** Chemico
EN 10088-2		1.4310	1.4318	1.4301	1.4306	1.4307	1.4301	1.4301	1.4301	1.4301	1	.4301	1.4541	1.4401	1.4404	1.4435	1.4571	1.4948	1.4833	1.4845	1.4878	1.4828	and mechani according to
DELIVERY CONDITI	ONS																						***** Chemic
HOT ROLLED COILS	N°1 Finish	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	and mechanic according to								
AND SHEETS	Floor plate				$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$						$\checkmark$	$\checkmark$								
	2E	$\checkmark$		$\checkmark$		$\checkmark$							$\checkmark$		$\checkmark$		$\checkmark$						
	2D / 2B	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$									
COLD ROLLED COILS AND SHEETS	BA	$\checkmark$		$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$								
	Work hardened	$\checkmark$	$\checkmark$	$\checkmark$				$\checkmark$	$\checkmark$														
	Patterned			$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$					$\checkmark$								
TYPICAL	С	0,10	0,03	0,04	0,03	0,025	0,04	0,04	0,04	0,04		0,04	0,05	0,06	0,03	0,03	0,05	0,06	0,06	0,05	0,05	0,05	
	Cr	17,4	17,2	18,2	18,2	18,2	18,2	18,2	18,2	18,2		18,2	17,3	16,7	16,7	17,4	16,7	18,2	22,6	24,3	17,2	19,3	
COMPOSITION	Ni	7,6	6,6	8,1	10,1	8,1	8,1	8,6	8,6	9,1		9,6	9,1	10,6	10,3	13,0	10,6	8,1	13,1	19,1	9,1	11,1	
	Мо	-	-	-	-	-	-	-	-	-		-	-	2,1	2,1	2,7	2,1	-	-	-	-	-	
	Others	-	Ν	-	-	-	Cu	-	Cu	-		-	Ti	-	-	-	Ti	Ν	Si	Si	Ti	Si	
	0.2% Yield Strength Mpa	280	350	270	250	250	260	250	250	250		240	250	300	270	300	270	300	300	260	260	290	
MECHANICAL PROPERTIES AT	Rm tensile Strength MPa	700	800	650	570	630	630	630	620	600		600	590	610	580	600	580	600	600	580	600	640	
20 °C - TYPICAL /ALUES	Elongation A% A ₀ (thickness < 3mm) A ₅ (thickness ≥ 3mm)	50	45	54	55	54	56	56	58	58		60	57	50	52	50	55	54	45	45	57	55	
FOOD CONTACT M	.D.21/3/73	$\checkmark$		$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$												
	General	+	++	++	++	++	++	++	++	++		++	+++	+++	+++	++++	+++	++	+++	+++	+++	+++	
CORROSION RESISTANCE	Pitting	+	++	++	++	++	++	++	++	++		++	+++	+++	+++	++++	+++	++	+++	+++	+++	++	
	SCC	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	
	Heat resistence	+	++	++	++	++	++	++	++	++		++	+++	++	++	++	++	++	++++	++++	++	+++	° Not applicable
	(	++	++	++	+++	++	+++	+++	++++	++++	-	++++	+++	++	+++	+++	+++	++	+	+	++	+	+ Acceptable ++ Good
WELDABILITY		++	++++	+++	++++	++++	+++	+++	+++	+++		+++	+++	+++	++++	++++	++++	+++	+++	++	++	+++	+++ Excellent ++++ Superio

The above table reports the main steels produced and traded by Arvedi AST. Other steel grades are also available. You can check them out on our website. For any different requirements, please contact marketing.ast@acciaiterni.it

The above mentioned figures, which refer to 1 mm CR, 2B finish, are approximate; they can vary according to thickness and finishing

## **Product portfolio**

A complete range of stainless steel grades

		FER	RITIC									
		FERF	O CHRC	DME	FERRO CHROME STABILIZED				FERRO CHROME MOLYBDENUM			
ACCIAI SPECIALI TERNI		410 S	STR 12	430	409	409 LI	430 TI	439 M	441 LI	434	444	4513
EN 10088-2		1.4000	1.4003	1.4016	1.4512	1.4512	1.4520	1.4510	1.4509	1.4113	1.4521	1.451
	ONS											
HOT ROLLED COILS	N°1 Finish	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
AND SHEETS	Floor plate											
	2E											
	2D / 2B	$\checkmark$	$\checkmark$	√ *	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
COLD ROLLED COILS AND SHEETS	BA			$\checkmark$		$\checkmark$	$\checkmark$	√ ***	√ ***	$\checkmark$	√ ***	$\checkmark$
	Work hardened			√ **								
	Patterned			$\checkmark$								
	С	0,03	0,02	0,04	0,02	0,01	0,02	0,02	0,02	0,06	0,02	0,02
TYPICAL	Cr	12,2	11,3	16,2	11,5	11,5	16,2	17,7	18,2	16,7	17,7	16,3
COMPOSITION	Ni	-	0,5	-	-	-	-	-	-	-	-	-
	Mo	-	-	-	-	-	-	-	-	1,0	2,1	1,2
	Others	-	-	-	Ti	Ti	Ti	Ti, Nb	Ti, Nb	-	Ti, Nb	Ti
	0.2% Yield Strength Mpa	300	320	300	250	250	300	280	300	320	330	300
MECHANICAL PROPERTIES AT	Rm tensile Strength MPa	450	500	500	420	420	450	450	470	500	500	470
20 °C - TYPICAL VALUES	Elongation A% A_ (thickness < 3mm) A_s (thickness ≥ 3mm)	25	23	27	30	32	27	30	28	25	28	28
FOOD CONTACT M	.D.21/3/73			$\checkmark$				$\checkmark$	$\checkmark$		$\checkmark$	
	General	0	0	+	0	0	+	+	+	++	+++	++
CORROSION RESISTANCE	Pitting	o	0	+	0	+	++	+	++	++	+++	++
ALDIDIAINCE	SCC	+	+	++	+	+	++	++	++	++	+++	++
	Heat resistence	0	0	+	0	++	+	++	+++	+	+	+
	1	+	+	+	++	++	++	++	++	+	+	++
WELDABILITY		+	++	+	++	+++	+++	+++	+++	+	+++	+++

° Not applicable/not required + Acceptable ++ Good +++ Excellent +++ Superior performance

\* 2D/2B finish is feasible only in relation to

\*\* 430 HT and 430 AR grades coil after

\*\*\* Only for max. thickness 1.0 mm, larger thicknesses will be agreed according to the

the final use

use

work hardening process

The above table reports the main steels produced and traded by Arvedi AST. Other steel grades are also available. You can check them out on our website. For any different requirements, please contact marketing.ast@acciaiterni.it

The above mentioned figures, which refer to 1 mm CR, 2B finish, are approximate; they can vary according to thickness and finishing



COLD ROLLED

# Arvedi AST

## Dimensions

COLD ROLLED COILS							
STEEL GROUP	THICK	NESS mm	WIDTH mm				
	FROM	TO	FROM	то			
FERRITIC 2D-2B	0,35*	0,79	100	1270			
FERRITIC 2D-2B	0,8	3	100	1520			
	0,35*	0,79	100	1270			
AUSTENITIC AND FERRITIC BA	0,8	1,5	100	1520			
	1,51	2	100	1270			
ALISTENUTIC OD OD	0,4	0,69	100	1270			
AUSTENITIC 2D-2B	0,7	5	100	1520			

Coil inner diameter: 610 mm and 508 mm

COLD ROLLED SHEETS							
STEEL GROUP	THICKN	ESS mm	WIDT	H mm	LENGTH mm **		
	FROM	TO	FROM	то	FROM	TO	
	0,35*	0,79	150	500	250	4000	
	0,35*	0,79	501	1000	500	4000	
	0,35*	0,79	1001	1250	1000	4000	
FERRITIC 2D-2B	0,8	3	150	500	250	4000	
	0,8	3	501	1000	500	4000	
	0,8	3	1001	1250	1000	4000	
	0,8	3	1250	1524	1000	6000	
	0,35*	1,5	150	500	250	4000	
	0,35*	1,5	501	1000	500	4000	
	0,35*	1,5	1001	1250	1000	4000	
AUSTENITIC AND FERRITIC BA	0,8	1,5	1251	1524	1000	6000	
	1,51	2	150	250	500	4000	
	1,51	2	501	1000	500	4000	
	1,51	2	1001	1250	1000	4000	
	0,4	0,69	150	500	250	4000	
	0,4	0,69	501	1000	500	4000	
	0,4	0,69	1001	1250	1000	4000	
	0,7	3	150	500	250	4000	
AUSTENITIC 2D-2B	0,7	3	501	1000	500	4000	
AUSTENITIC 2D-2B	0,7	3	1001	1250	1000	4000	
	0,7	3	1251	1524	1000	6000	
	3,01	5	500	1000	1000	4000	
	3,01	5	1001	1250	1000	4000	
	3,01	5	1251	1524	1000	6000	

\* 0.35 mm thickness availability to be checked upon request \*\* >6000 length will be evalueted on client's request



## Cold rolled Tolerances

THICKNESS TOLERANCES COILS AN	THICKNESS TOLERANCES COILS AND SHEETS							
THICKNESS	TOLERANCES*							
≤ 0,59	± 0,030							
0,60 - 0,99	± 0,040							
1,00 - 1,49	± 0,050							
1,50 - 1,99	± 0,060							
2,00 - 2,99	± 0,090							
3,00 - 4,49	± 0,13							
4,50 - 4,99	± 0,14							
5,0	± 0,15							

\* Measured 30 mm from edge

Asymmetric tolerances available

WIDTH TOLERANCES COILS AND SHEETS								
THICKNESS	WIDTH	TOLERANCES*						
≤ 1,75		- 0 + 0,3						
1,76 - 2,50	< 150	- 0 + 0,4						
2,51 - 3,00		- 0 + 0,5						
≤ 1,75		- 0 + 0,3						
1,76 - 3,00	151 - 230	- 0 + 0,5						
3,01 - 5,00		- 0 + 2,0						
≤ 3,00	- 231 - 609	- 0 + 0,5						
3,01 - 5,00	231-009	- 0 + 2,0						
≤ 3,00	(10, 1524	- 0 + 1,5						
3,01 - 5,00	610 - 1524	- 0 + 2,0						

\* Measured 30 mm from edge Asymmetric tolerances available

OTHER 1	OLERANCES					
LEN	GTH	FLATNESS	CAMBERING			
LENGTH	TOLERANCES mm	FLATNESS	CAMBERING			
250 - 2000	- 0 + 4					
2001 - 4000	- 0 + 6	According to required standard	According to required standard			
4001 - 6000	- 0 + 8					

Special requests of dimensions and tolerances will be evaluated from time to time

#### **Surface Protections**

Cold rolled products are protected with interleaving paper; on request they can be delivered without protection or protected on one side or both by a removable plastic film based on the customer requirements.

## **Surface Finishes**

A wide range of surface finishes for aesthetic and technical solutions.

DESCRIPTION	AISI ASTM A 480	EN 10088-2	ACCIAI SPECIALI TERNI EQUIVALENT	SURFACE CONDITIONS	COMMENTS
Hot rolled, annealed, pickled and cold re-rolled		2H	Work hardened	Oiled	Cold worked to achieve higher tensile strength
Cold rolled, annealed and mechanically descaled		2E	ZH	Rough and dull	Usually applied to steels with a scale which is very resistant to pickling solutions
Cold rolled, annealed and pickled	2D	2D	2D	Smooth	Finish for good formability, but not as smooth as 2B or 2R
Cold rolled, annealed, pickled and skinpassed	2B	2B	2B	Smoother than 2D	Most common finish to ensure good corrosion resistance, smoothness and flatness
Cold rolled, bright annealed and light skinpassed	BA	2R	BA	Smoth, bright, mirror -like	Smoother and brighter than 2B
Polished	3	2G	3	Dull	Unidirectional texture
Polished	4	2G	4	Polished, bright	Unidirectional texture
Scotch Brite		2J	Scotch Brite	Brushed	Unidirectional texture Ra<0,2µm
Duplo	4	2K	Duplo	Soft bright polished	Unidirectiona texture, Ra<0,5µm
Transparent coil-coated			Silver Ice®	Steel texture is visible	Anti-fingerprint, easy to clean
Coloured coil-coated		2L	Vernest®	Coloured	General use coloured coating
Pre-primed coil-coated			Primerinox®	Backing coat on B-side	Improves the adhesion of PU/epoxy foams

Surface finishes availability must be verified by steel grade on the basis of specific requests



# **STAINLESS STEEL**



## 2H - Work hardened coils

TYPICAL MECHANICAL PROPERTIES								
GRADE ACCIAI SPECIALI TERNI	COLD WORK LEVEL	TENSILE STRENGTH Rm (mpa)	0.2% STRENGTH Rp 0.2% mpa	ELONGATION A50 (%)				
	Annealed	> 620	>310	>40				
	1/8 hard	> 690	>380	>40				
301	1/4 hard	> 860	>515	> 25				
301 L	1/2 hard	> 1035	>760	>18				
	3/4 hard	>1205	>930	>12				
	full hard	> 1275	>965	> 9				
	Annealed	> 515	>205	>40				
	1/16 hard	> 620	>310	>40				
304	1/8 hard	> 690	>380	>30				
	1/4 hard	> 860	>515	>10				
	1/2 hard	> 1035	>760	> 7				
430 HT/430 AR	Up to HRC 32							

Delivery conditions: thickness from 0.4 to 2.00; width from 1000 to 1250 mm The hardening operation gives stainless steel higher mechanical resistance. Acciai Speciali Terni 430 HT/430 AR, 304, 301 and 301 L are delivered in the work hardened condition

## 2E - Cold rolled, annealed and mechanically descaled

MINIMUM THICKNESSES mm								
	WIDTH mm							
STEEL GROUP	1020	1270	1520					
304 / 321	1,50	1,50	2,50					
301	1,50	1,80	3,00					
316L	1,50	2,50	4,00					
3095	1,80	2,00	3,50					
310	1,80	3,00	4,00					

Shown table may be revised in the future for additional thickness ranges and

new materials

Thickness tolerances according to UNI EN ISO 9445-2

# Arvedi AST

## **STANDARD FINISHES**



# Arvedi AST

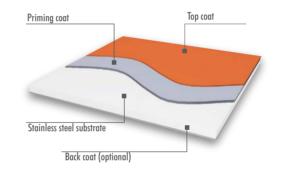
**VIVINOX®** 

## **Coil coated stainless steel**

Available on all ferritic and austenitic grades produced by Acciai Speciali Terni, the organic coatings of the **Vivinox**<sup>®</sup> range enable to enhance and customise typical stainless steel finishes. With the anti-fingerprint coating **Silver Ice**<sup>®</sup>, the visual impact of stains and fingerprint smudges is lowered, furthermore, these stains can be dry-cleaned. **Silver Ice**<sup>®</sup> also offers a limited protection against scratches and corrosion. Stainless steel panels coated with **Vernest**<sup>®</sup> coloured coatings offer unlimited freedom in the choice of colour schemes for architectural and construction projects.

The organic primer layer applied on the bottom side of the **Primerinox**<sup>®</sup> products increases the surface energy of stainless steel, allowing for an optimal spread and adhesion of epoxy and PU foams.

The **Vivinox**<sup>®</sup> organic coatings are applied on stainless steel on a state-of-the-art coil coating line which ensures that the product properties are homogenous over the entire surface of the coil.



PRODUCT RANGE								
	MIN	MAX						
Thickness	0,4 mm	1,2mm						
Width	100 mm	1500 mm						
Coil weight	2.000 kg	12.000 kg						
Surface protection	Temporary protective fi	Im on request						
Packaging	Special for coil coat	ed products						

ORGANIC C	OATINGS		
SERIE		DRY FILM THICKNESS	DESCRIPTION
SILVER ICE®	Transparent finish	1,5 - 3,5 μm	Anti-fingerprint and cleanability properties
VERNEST®	Coloured finish	20 - 25 μm	Polyester, super polyester or PVDF are available for outdoor applications
PRIMERINOX®	Preprimed surface	5 - 8 μm	For foam adhesion, post painting, adhesive structural bonding

Various steel grades and coatings can be provided in agreement with the sales department







# NLESS STEEL

# Arvedi Ast R

PATTERNED AND MICRO-PATTERNED FINISHES

## Arvedi AST

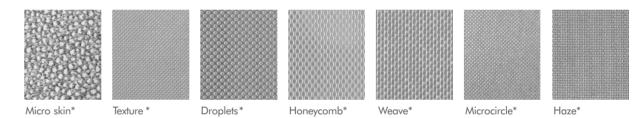
## Perfection in all its details

Patterned and micro-patterned finishes are obtained using specifically patterned cylinders during cold rolling operations and followed by bright annealing.

## **Patterned Finishes**

Elephant skin				
Elephant skin	linen	Linen (Dull version)	Sauare	Diamond

## **Micro-Patterned Finishes**



#### Personalized patterns on request

AVAILABLE DIMENSIONS						
ТҮРЕ	THICKNESS	WIDTH	SHEETS			
304 / 430	0,6 ÷ 1,5	500÷1250	500÷4000			
504 / 450	0,8÷1,5	1251÷1520	500÷4000			

\* Based on project

# Arvedi AST

HOT ROLLED

## **Dimensions** \* / **Tolerances**

HOT ROLLED COILS					
STEEL GROUP	THICK	THICKNESS mm		MILL EDGES	
SHEETS FROM 1000 TO 6000 mm	FROM	то	WIDTH mm		
Ferro Chrome - Chrome Molybdenum and Stabilized Ferritic	2.0	6,5	1000	1020	
	2,5	6,5	1250	1270	
	3,5	6,5	1500	1520	
	1,84	6,5	1000	1020	
Ferro Chrome Nickel Austenitic**	2,5	6,5	1250	1270	
	3,5	6,5	1500	1520	
	2,5	6,5	1000	1020	
Ferro Chrome Nickel Molybdenum and Heat Resistant Austenitic	3,5	6,5	1250	1270	
	5,5	6,5	1500	1520	

Arvedi AST

\* Indicative values: limits to be confirmed for each stainless steel grade \*\* Ferro Chrome Nickel Manganese Nitrogen Austenitic available 321 for 1520 mm length, min. thickness 3.8 mm

THICKNES	S TOLERAN	CES
THICKNESS	TOLERANCE*	
2,00	± 0,12 mm	Inner coil diameter: 610 mm (implicit) and 508 mm CAMBER 20 mm every 5 metres
2,01 - 5,0	± 0,15 mm	FLATNESS According to required standard
5,01 - 6,0	± 0,18 mm	
> 6,0	± 0,22 mm	

\* Or asymmetrical tolerances of the same total range; thickness is measured 40 mm from the edge

TRIMMED EDGES		THICK	IECC mm				
WIDTH mm		THICKNESS mm					
	2,00 ÷ 2,50	2,51 ÷ 3,00	3,01 ÷ 5,00	5,01 ÷ 6,50			
150 ÷ 230	- 0 +0,50	- 0 +0,50	- 0 +2,00	- 0 +3,00			
231 ÷ 609	- 0 +0,50	- 0 +0,50	- 0 +2,00	- 0 +4,00			
610 ÷ 1524	- 0 +1,50	- 0 +1,50	- 0 +2,00	- 0 +4,00			

MILL EDGES -0 + 20

LENGTH TOLERANCES						
	IGTH	TOLE	RANCE			
from mm	to mm	mm	mm			
250	2000	-0	+4			
2001	4000	-0	+6			
4001	6000	-0	+8			

Special requests of dimensions and tolerances will be evaluated upon need ISO 9444-2 applicable to all dimensional tolerances

## **Finishes**

FINISHES						
DESCRIPTION	ASTM A793 PATTERN B	AISI ASTM A 480	EN 10088-2	ACCIAI SPECIALI TERNI EQUIVALENT	SURFACE CONDITIONS	NOTE
Hot rolled, not annealed, not pickled		(HR)	1U	Black	Covered with mill scale	Suitable for products which are further processed (e.g. Strip for rerolling)
Hot rolled, annealed and pickled		1	1D	1	Free from scale	Normal standard to guarantee good corrosion resistance
Floor plates	V		1M	1M	Floor pattern	Patterned on one side

Finishes

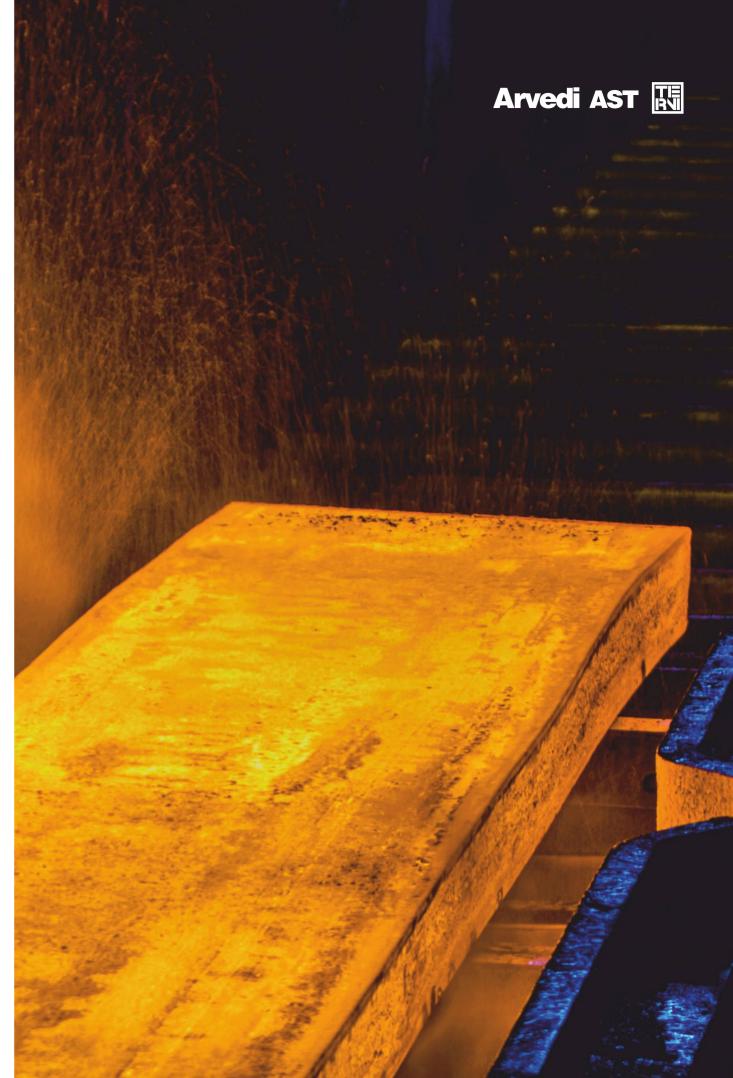


## **Floor Plates**

FLOOR PLATES SPECIFICATIONS								
Nominal thickness (mm)	3	3,5	4	4,5	5	5,5	6	6,35
Pattern thickness (mm)	1,39	1,39	1,39	1,52	1,52	1,52	1,52	1,52
Weight (kg/m²)	30	33	38	41	45	48	52	55
Length (mm)	1000 - 6000							
Acciai Speciali Terni	Width		1020, 1270 mm		Minimum thickness		3 mm	
304 MS - 304MSA - 304 DL			1545 mm				4 mm	
Acciai Speciali Terni	Acciai Speciali Terni Width		1020 mm	1	- Minimum thickness		4 mm	
316 - 316 L	VV I	um	1270 mm				5 mm	

Antisliding characteristics of floor plates are certified according to DIN 51130 Dimensional tolerances are according to ASTM A793 Pattern B Finishes





# **STAINLESS STEEL**

# Arvedi AST 🔣

**SERVICE CENTERS** 

Thanks to its new service center network with locations in Milan (Italy), Dortmund (Germany) and Cayirova/Kocaeli (Turkey), Arvedi AST offers a wide range of products and services on an international scale. Based on a large range of products from stock, state of the art equipment and high level materials expertise we offer standard and customized services and solutions for slitting, cutting-to-length and surface treatment. An extensive certified quality management system and technical consultation ensures high quality end-to-end solutions and added value for our customers.

- Customised packaging and shipping
- Supply chain solutions, including stock management
- Commercial and technical sales support
- Cutting and slitting
- Various finishing treatments
- Guaranteed safety during all phases









## **Terninox**

# ITALIAN REFERENCE SERVICE CENTRE FOR SURFACE TREATMENT

Chosen partner for the consumer goods sector and high quality applications. Situated close to major Italian stainless steel end-users and to access to Central European regions.

Location: Milan, Italy

## **AST** Deutschland

## ONE OF THE LARGEST STAINLESS STEEL SERVICE CENTRES IN EUROPE In Germany's industrial heartland, it is one of Central Europe's largest service centres with a wide range of coil processing capacity.

Location: Dortmund, Germany

## **AST** Turkey

## SERVICE CENTRE OF EXCELLENCE FOR EASTERN EUROPE AND THE MIDDLE EAST / NORTHERN AFRICA

One of the leading service centres in a growing area for stainless steel, AST Turkey provides excellent service for the Eastern Europe and Middle East/North Africa.

Location: Cayirova, Kocaeli, Turkey

# Arvedi AST

## **NEW ENVIRONMENTALLY FRIENDLY PACKAGING SOLUTIONS**

The strong focus on the sustainability at Arvedi AST has led to the progressive simplification of our packaging. This means a reduction of the plastic and wood component, guaranteeing always an optimal level of the product protection (5 types of standard packaging).

The result is the consequent reduction of waste materials that the customer must dispose and manage internally through separation and bestowal operations. For every kg of saved plastic, an important reduction is generated in terms of CO<sub>2</sub>

For applications, destinations and particular transports, specific solutions are guaranteed (special packaging).

12 RESPONSIBLE CONSUMPTIC CO

## PLASTIC AND CO<sub>2</sub> EMISSION REDUCTION

## **STANDARD PACKAGING**









Eeye-to-the-side coils (96)

Eye-to-the-side coils (R1)

Eye-to-the-sky coils (V0)

Blanks (Q1)

Sheets (FF)

STANDARD PACKAGING	EYE-TO-THE-SIDE COILS		EYE-TO-THE SKY COILS	BLANKS	SHEET PACKAGES
	96	R1	V0	Q1	FF
Wooden frame		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Outer protection with ribbed plastic sheet		$\checkmark$			
Multiple strips			$\checkmark$		
Protection for upper and lower package faces				$\checkmark$	
Vertical edge-protection angle pieces				$\checkmark$	
Upper package cover					$\checkmark$
Horizontal edge-protections angle pieces					$\checkmark$
Strip with radial straps	$\checkmark$				

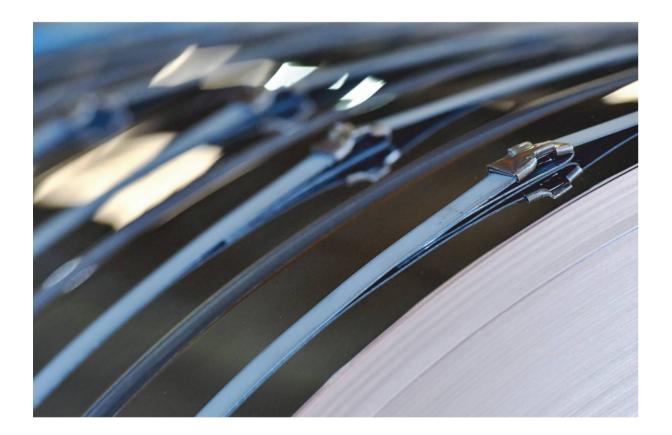


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## SPECIAL PACKAGING

EYE-TO-THE-SIDE COILS - WITHOUT WOODEN FRAME								
	98/99	R9	RY	R7	RO	W1		
Strip with radial straps	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		
Outer protection with ribbed plastic sheet	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		
Edge-protection angle pieces				$\checkmark$	$\checkmark$			
Multiple strips						$\checkmark$		
Strip wrapped in plastic film					$\checkmark$			

EYE-TO-THE-SIDE COILS - WITH WOODEN FRAME						
	R8	RM	R4	RH		
Wooden board	$\checkmark$		$\checkmark$			
Antiparasite wooden board		$\checkmark$		$\checkmark$		
Outer protection with ribbed plastic sheet	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		
Edge-protection angle pieces	$\checkmark$	$\checkmark$		$\checkmark$		
Multiple strips			$\checkmark$	$\checkmark$		
Strip wrapped in plastic film		$\checkmark$				



EYE-TO-THE-SKY COILS					
	V1	V2	VC		
Wooden board	$\checkmark$	$\checkmark$			
Antiparasite wooden board			$\checkmark$		
Outer protection with ribbed plastic sheet	$\checkmark$	$\checkmark$	$\checkmark$		
Upper ribbed plastic disc		$\checkmark$	$\checkmark$		
Edge-protection angle pieces			$\checkmark$		
Multiple strips	$\checkmark$	$\checkmark$	$\checkmark$		
Strip wrapped in plastic film			$\checkmark$		
Hygroscopic salts inside			$\checkmark$		

BLANKS		
	Q4	QT
Wooden frame	$\checkmark$	
Antiparasite wooden frame		$\checkmark$
Protection for upper and lower package faces	$\checkmark$	$\checkmark$
Package wrapped in polythene paper	$\checkmark$	$\checkmark$
Vertical edge-protection angle pieces	$\checkmark$	$\checkmark$
Horizontal edge-protections angle pieces	$\checkmark$	$\checkmark$

SHEET PACKAGES			
	F1	F2	FT
Wooden frame	$\checkmark$	$\checkmark$	
Antiparasite wooden frame			$\checkmark$
Upper package cover	$\checkmark$	$\checkmark$	$\checkmark$
Protection between wooden frame and package	$\checkmark$	$\checkmark$	$\checkmark$
Package covered with plastic film		$\checkmark$	$\checkmark$
Horizontal edge-protections angle pieces	$\checkmark$	$\checkmark$	$\checkmark$

For applications, destinations and particular transports, specific solutions are guaranteed (special packaging).

# <image>



## **QUALITY, SUPPLY CHAIN**

Customer requests, our daily commitment

## HIGH QUALITY PRODUCTS DEMAND THE HIGHEST SERVICE STANDARDS.

We guarantee the highest quality in technical services and support. We pursue a digital strategy integrated with automated sales processes, providing excellent solutions to optimise times and methods for managing customer requests. With the supply chain we work to optimise our logistics processes in a functional, fast and ecological way.

From design to delivery, our sales and service network guarantees maximum efficiency.

- Quality Management System
- Dedicated Technical Support
- Supply Chain
- Packaging

## **QUALITY MANAGEMENT SYSTEM**

The tradition of the Arvedi AST in the management of its productions through a Quality Management System, began in the 70s with the acquisition of the Quality System Certificate (Certificate of the Quality System) ASME (The American Society of Mechanical Engineers)

Today Arvedi AST boasts management systems certified in accordance with ISO 9001:2015 (Quality) ISO 14001:2015 (Environment), ISO 45001:2018 (Health and Safety) and ISO 50001:2018 (Energy) standards issued by the DNV certification body.

Arvedi AST also holds the certification as a Material Organization in accordance with the standards of the American Society of Mechanical Engineers, as regards the Forging Division, and the IATF 16949: 2016 (automotive) certification with regard to Tubificio di Terni and Finishing Center.

In addition to the awards related to its management systems, Arvedi AST holds the following **product approvals**:

- Certification for the production and sales of products intended for the manufacture of pressure vessels, in compliance with Pressure Equipment Directive 2014/68/EU, Annex I, Section 4.3 and AD 2000-Merkblatt WO
- Certificate of conformity of factory production control (CE marking) for the production of hot rolled steels for structural uses, in compliance with EN 10025-1:2004
- Certificate of conformity of factory production control (CE marking) for the production of stainless steel sheets, sheets and strips, in compliance with EN 10088-4:2009
- Ship approvals DNV Maritime and Lloyd's Register certifications for its stainless steel products

# Solutions designed to meet various needs

## DEDICATED TECHNICAL SUPPORT

High product quality is accompanied by high service specialisation. We work to ensure the highest quality in the technical assistance and support service, as our customer's needs represent a constant commitment throughout each stage of the supply. Our technicians are available to customers to provide product insights, test applications and help them identify the product and finishes best suited to their manufacturing needs.

## SUPPLY CHAIN / NEW LOGISTIC SOLUTIONS

From design to delivery, our network of service and sales centres allow us to closely support each customer and also guarantee maximum efficiency in delivery times. Our widespread presence on the market allows us to satisfy every request within competitive times, supported by an innovative IT system and by logistics that simplify and speed up the management of each process.





# Arvedi AST

## OUR STAINLESS STEEL IS THE MATERIAL OF EXCELLENCE FOR MANY MARKET SECTORS

Cutting-edge products, quality and new investments to respond with continuity, efficiency and flexibility to customer needs. The production of stainless steel Arvedi AST participates, through the multiple applications, in the innovation in the most crucial areas of progress, bringing the added value of a production attentive to sustainability.







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