ZWAHLEN&MAYR SA

2022 - 2023
ENG

INDEX

HISTORY

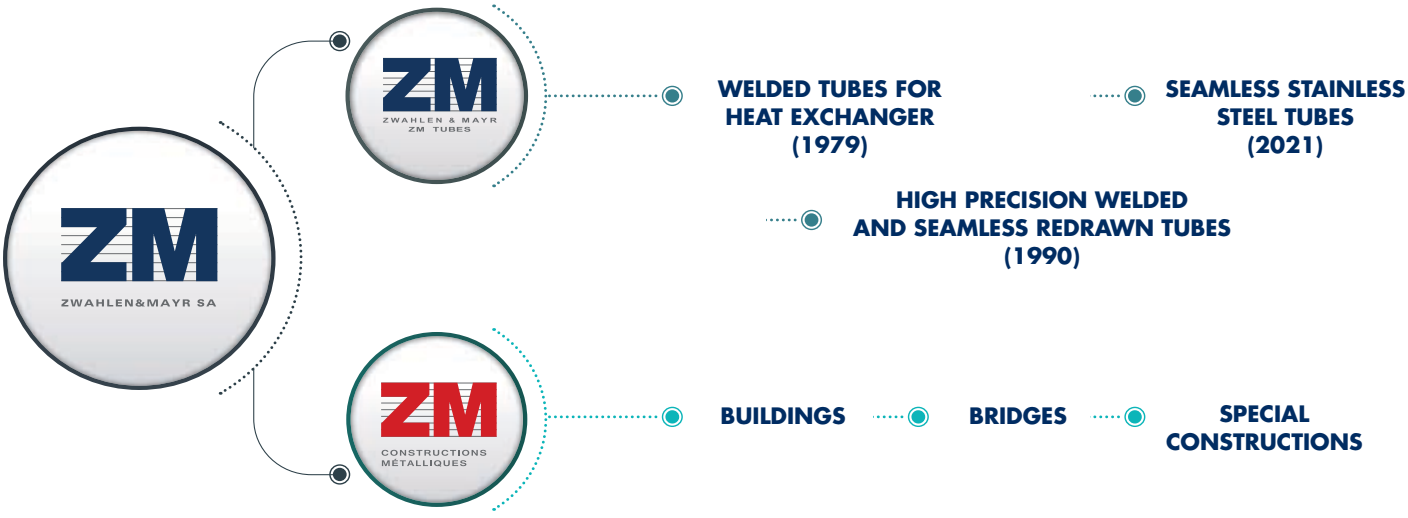
Founded in 1881 by Louis Zwahlen with a handcrafted production of art ironworks, this company has expanded over the years and today Zwahlen & Mayr is a primary contributor to the international industry and is active in two main sectors:

- production of welded, redrawn and seamless stainless steel tubes
- steel constructions

Since 1979, Zwahlen & Mayr has been a leading producer of welded stainless steel and nickel alloy tubes under the brand ZM Tubes. About ten years later (1990) Zwahlen & Mayr has started with the production of the redrawn stainless steel tubes until the production also of the seamless tubes started last 2021. These tubes are manufactured in Aigle, close to Geneva Lake and are 100% Swiss Made.
Thanks to continuous investment in machines and staff training, ZM Tubes is known throughout the world for its high quality products, excellent customer service and reliability for critical applications.
Situated in the heart of Europe, logistically perfect to serve main European industrial areas, ZM is always ready to meet the innovative challenges of the market.

- **1881**
  Louis Zwahlen sets up a workshop in Lausanne producing decorative wrought ironwork
- **1918**
  Eng. Henri Mayr steers the company's activities towards steel construction
- **1946**
  ZWAHLEN & MAYR SA becomes an important competitor in steel construction
- **1964**
  The rapid growth of the company necessitates a relocation of production from Lausanne to Aigle
- **1979**
  WELDED STAINLESS STEEL TUBE department is set up
- **1990**
  New production line for REDRAWN TUBES
- **1994**
  2 new welding lines are installed: after 12 years the annual production reaches volumes between 1,000 and 1,500 tons
- **2002**
  A new investment: ZM purchases from its main competitor complete redrawn tubes production line with a new 2,100 - sqm production site
- **2010**
  Acquisition of coil slitting machine in order to slit 1,500 mm wide coils of 20 tons
- **2012**
  Acquisition by Italian Group CIMOLAI Spa
- **2015**
  New investments: extension of production site up to 4,000 - sqm and new laser or TIG lines up to 114 mm
- **2017**
  New off-line furnace for redrawn tubes with outstanding capacity increase and degreasing machine
- **2018**
  New TIG welding lines for diameters of 12 to 63,5 mm
- **2021**
  SEAMLESS STAINLESS TUBE department is set up

ABOUT US



145,000
M2 OF INDUSTRIAL AREAS

30,000
M2 OF INDUSTRIAL BUILDINGS

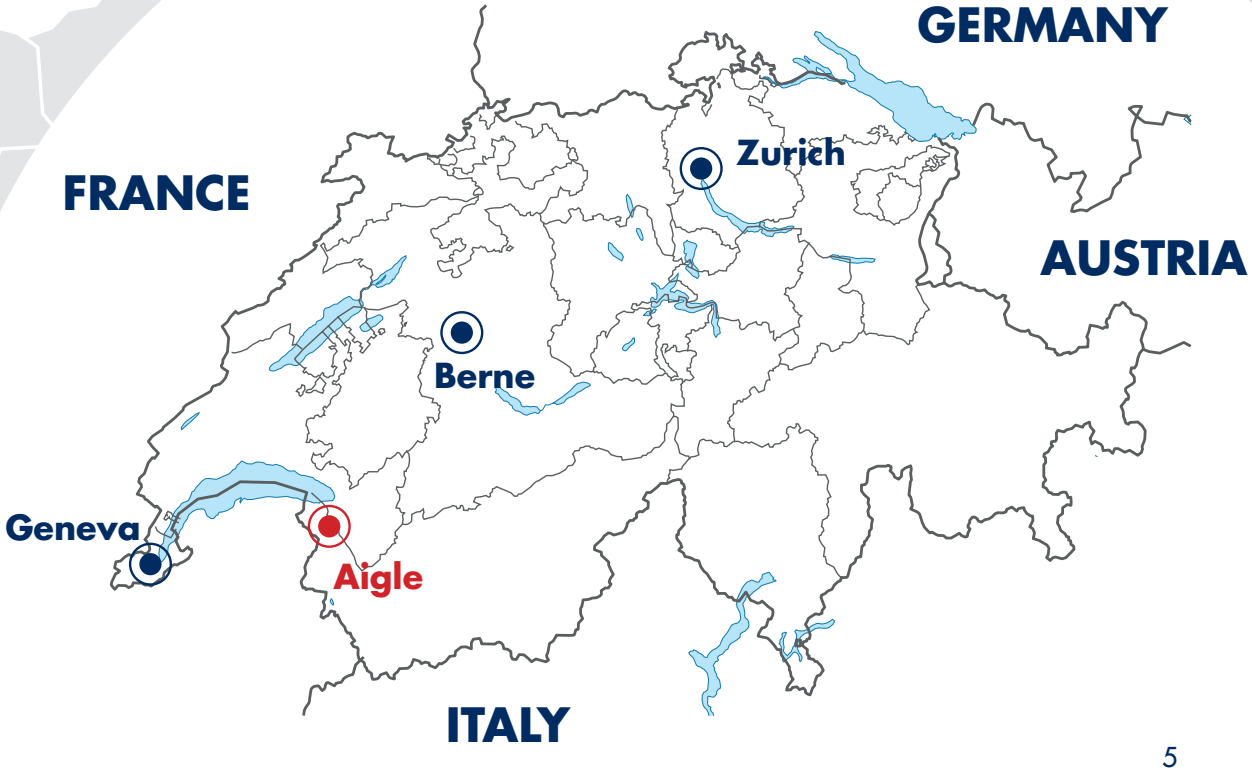
5,000
TONS OF WELDED TUBES PER YEAR

160
EMPLOYEES

The ESG criterias (Environmental, Social Governance) are of fundamental importance to our company and represent opportunities in our investment processes. For over 10 years ZM has been committed to implementing solutions for the reduction of carbon emissions in the environment by being part of the agreements with ACT (Swiss Cleantech Agency). Our determination is even stronger with the energy challenges we are currently facing. More than 20,000 m2 of solar panels already installed demonstrate the relevance of our commitment and open the door to imminent developments towards new technologies, such as the production of green hydrogen on site.

WHERE WE ARE

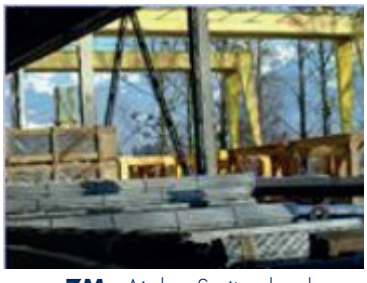
ZWAHLEN & MAYR S.A.
ZM TUBES
Route de l'Industrie 18
CH – 1860 Aigle
Tel. : +41 24 4684646
E-mail: zmtubes@zwahlen.ch



OFFICES & FACILITIES

ZM - Aigle - Switzerland
OFFICES

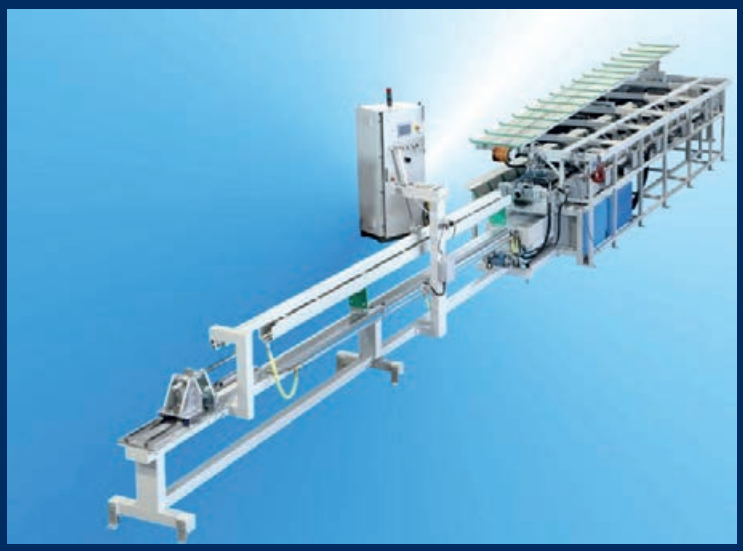
ZM - Aigle - Switzerland
PRODUCTION AREA



ZM - Aigle - Switzerland
TUBES STORE

TUBES

ZM Tubes manufactures three types of stainless steel tubes: standard welded, and redrawn or seamless forhigh precision applications. These tubes are used in a wide range of applications as heat exchangers, condensers, evaporators, feed water heaters for power plants and equipment in the food industry as well as in the pharmaceutical, pneumatic, automotive, instrumentation, oil & gas, valves and aerospace industries.
Inspection and tests are made in accordance with the execution standard. Samples are taken during the manufacturing process to carry out mechanical and metallurgical tests. All materials are supplied with Mill test certificates (MTC) according to EN 10204 3.1 or 3.2. Tubes may be made available to third party inspection agencies such as TÜV or Lloyd's.



MARKETS


PHARMACEUTICAL
CHEMICAL & PETROCHEMICAL
HEAT EXCHANGERS
INSTRUMENTATION
ELECTROMAGNETIC
PNEUMATIC
FOOD INDUSTRY
POWER PLANTS
AUTOMOTIVE
AIR COOLERS

MAIN GRADES, STANDARDS AND SERVICES

STAINLESS STEEL GRADES

- Austenitic
  304/304L/316/316L/316SL/316TI
  321/317L/317LN
- Super Austenitic
  904L/254SMO/N08926/N08800/AL6XN
- Duplex
  S32101/S32304/S32205/
  S31803/S32750/S32760
- Inconel
  600/601/602/625/825
- Ferritic
  S44100/S44400/S43035
- Heat resisting steels
  310S/321H/304H
- Incoloy + Hastelloy
  on request

MAIN STANDARDS

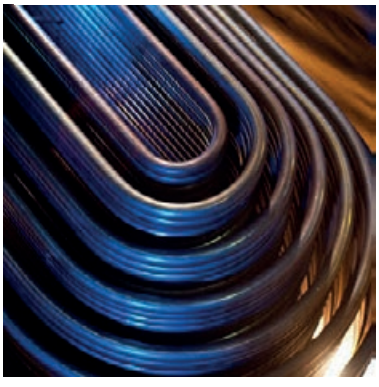
ASTM / ASME A213/A249/A269/A270/
A312/A688/A789/A790/A1016/B674/
B626/B676/B704/B751/BPE
DIN 17455/17457/11850
EN 10217/10216-5/10305/10357/10893
DIN 11866
Customer specifications

EXECUTION

Welded, seamless and precision redrawn
Brushed, polished
Hard or Annealed (bright annealed) and pickled

SERVICE

U-Tubes
Finned tubes (lowfin, embedded, applied and foot fins)
Machining
Polished
Electropolishing inside



MATERIAL GRADES

Austenitic steel Cr - Ni														
WN	Name Nom	EN Grade	AISI / UNS	C %	Si %	Mn %	S %	N %	Cr %	Cu %	Mo %	Ni %	Ti %	Others Andere Autres
1.4301	AISI 304	X5CrNi18-10 (X4CrNi18-10)	304 / S30400	≤ 0,07	≤ 1,00	≤ 2,00	≤ 0,015	≤ 0,11	17,00 - 19,50	-	-	8,00 - 10,50	-	-
1.4306	AISI 304L	X2CrNi19-11	304L / S30403	≤ 0,030	≤ 1,00	≤ 2,00	≤ 0,015	≤ 0,11	18,00 - 20,00	-	-	10,00 - 12,00	-	-
1.4307	AISI 304L	X2CrNi18-9	304L / S30403	≤ 0,030	≤ 1,00	≤ 2,00	≤ 0,015	≤ 0,11	17,50 - 19,50	-	-	8,00 - 10,00	-	-
1.4541	AISI 321	X6CrNiTi18-10	321 / S32100	≤ 0,08	≤ 1,00	≤ 2,00	≤ 0,015	-	17,00 - 19,00	-	-	9,00 - 12,00	Ti 5 x C max 0,7	-

Austenitic steel Cr - Ni - Mo														
WN	Name Nom	EN Grade	AISI / UNS	C %	Si %	Mn %	S %	N %	Cr %	Cu %	Mo %	Ni %	Ti %	Others Andere Autres
1.4401	AISI 316	X5CrNiMo17-12-2 (X4CrNiTi 17-12-2)	316 / S31600	≤ 0,07	≤ 1,00	≤ 2,00	≤ 0,015	≤ 0,11	16,50 - 18,50	-	2,00 - 2,50	10,00 - 13,00	-	-
1.4404	AISI 316L	X2CrNiMo17-13-2 (X2CrNiMo17-12-2)	316L / S31603	≤ 0,03	≤ 1,00	≤ 2,00	≤ 0,015	≤ 0,11	16,50 - 18,50	-	2,00 - 2,50	10,00 - 13,00	-	-
1.4432	AISI 316L	X2CrNiMo17-12-3	316L	≤ 0,03	≤ 1,00	≤ 2,00	≤ 0,015	≤ 0,11	16,50 - 18,50	-	2,50 - 3,00	10,50 - 13,00	-	-
1.4435	AISI 316L	X2CrNiMo18-14-3	316L	≤ 0,03	≤ 1,00	≤ 2,00	≤ 0,015	≤ 0,11	17,00 - 19,00	-	2,50 - 3,00	12,50 - 15,00	-	-
1.4436	AISI 316	X5CrNiMo17-13-3 (X4CrNiMo17-13-3)	316	≤ 0,05	≤ 1,00	≤ 2,00	≤ 0,015	≤ 0,11	16,50 - 18,50	-	2,50 - 3,00	10,50 - 13,00	-	-
1.4438	AISI 317L	X2CrNiMo18-16-4 (X2CrNiMo18-15-4)	317L / S31703	≤ 0,03	≤ 1,00	≤ 2,00	≤ 0,015	≤ 0,11	17,50 - 19,50	-	3,00 - 4,00	13,00 - 16,00	-	-
1.4439	AISI 317LN	X2CrNiMoN17-13-5	317LN / S31753	≤ 0,03	≤ 1,00	≤ 2,00	≤ 0,015	0,12-0,22	16,50 - 18,50	-	4,00 - 5,00	12,50 - 14,50	-	-
1.4571	AISI 316 Ti	X6CrNiMoTi17-12-2	316Ti / S31635	≤ 0,08	≤ 1,00	≤ 2,00	≤ 0,015	-	16,50 - 18,50	-	2,00 - 2,50	10,50 - 13,50	Ti 5 x C max 0,70	-

Duplex steel														
WN	Name Nom	EN Grade	AISI / UNS	C %	Si %	Mn %	S %	N %	Cr %	Cu %	Mo %	Ni %	Ti %	Others Andere Autres
1.4162	2101® Lean Duplex	-	S32101	≤ 0,040	≤ 1,00	4,00 - 6,00	≤ 0,30	0,20 - 0,25	21,0 - 22,0	0,10 - 0,80	0,10 - 0,80	1,35 - 1,70	-	-
1.4362	Alloy 2304 Lean Duplex	X2CrNiN23-4	S32304	≤ 0,030	1,00	2,00	0,015	0,05 - 0,20	22,00 - 24,00	0,10 - 0,60	0,10 - 0,60	3,50 - 5,50	-	-
1.4462	Alloy 2205 Duplex	X2CrNiMoN22-5-3	S32205	≤ 0,030	1,00	2,00	0,02	0,14 - 0,20	22,00 - 23,00	-	3,00 - 3,50	4,50 - 6,50	-	-
1.4462	Alloy 2205 Duplex	X2CrNiMoN22-5-3	S31803	≤ 0,030	1,00	2,00	0,02	0,08 - 0,22	21,00 - 23,00	-	2,50 - 3,50	4,50 - 6,50	-	-
1.4410	Alloy 2507 Super Duplex	X2CrNiMoN25-7-4	S32750	≤ 0,030	≤ 1,00	≤ 2,00	≤ 0,015	0,20 - 0,35	24,0 - 26,0	-	3,00 - 4,50	6,00 - 8,00	-	-
1.4501	F55 Super Duplex	X2CrNiMoCuWN25-7-4	S32760	≤ 0,030	≤ 1,00	≤ 1,00	≤ 0,015	0,20 - 0,30	24,0 - 26,0	0,50 - 1,00	3,00 - 4,00	6,00 - 8,00	-	W 0,50 - 1,00

MATERIAL GRADES

Super austenitic steel														
WN	Name Nom	EN Grade	AISI / UNS	C %	Si %	Mn %	S %	N %	Cr %	Cu %	Mo %	Ni %	Ti %	Others Andere Autres
1.4539	AISI 904L	X1NiCrMoCuN25-20-5	904L / N08904	≤ 0,020	≤ 0,70	≤ 2,00	≤ 0,010	≤ 0,15	19,00 - 21,00	1,20 - 2,00	4,00 - 5,00	24,00 - 26,00	-	-
1.4547	Alloy 254 SMO	X1CrNiMoCuN20-18-7	S31254	≤ 0,020	≤ 0,70	≤ 1,00	≤ 0,010	0,18-0,25	19,50 - 20,50	0,50 - 1,00	6,00 - 7,00	17,50 - 18,50	-	-
1.4529	Alloy 6Mo	X1NiCrMoCuN25-20-6 (X1NiCrMoCuN25-20-7)	N08926	≤ 0,020	≤ 1,00	≤ 2,00	≤ 0,015	0,10-0,25	19,00 - 21,00	0,50 - 1,50	6,00 - 7,00	24,00 - 26,00	-	-
1.4876	Alloy 800	X10NiCrAlTi32-20	N08800	0,05-1,00	≤ 1,00	≤ 1,50	≤ 0,015	-	19,00 - 23,00	≤ 0,75	-	30,00 - 34,00	0,15 - 0,60	Al 0,15 - 0,60
-	AL6XN ®	-	N08367	≤ 0,030	≤ 1,00	≤ 2,00	≤ 0,030	0,18-0,25	20,00 - 22,00	≤ 0,75	6,00 - 7,00	23,50 - 25,50	-	Fe Bal.

High nickel alloy														
WN	Name Nom	EN Grade	UNS	C %	Si %	Mn %	S %	N %	Cr %	Cu %	Mo %	Ni %	Ti %	Others Andere Autres
2.4816	Alloy 600	NiCr15Fe	N06600	0,05 - 0,10	≤ 0,50	≤ 1,00	≤ 0,015	-	14,00 - 17,00	≤ 0,5	-	71,0 - 80,0	≤ 0,3	Fe 6,0-10,0 Al ≤ 0,3 B ≤ 0,006 Co ≤ 1,0
2.4851	Alloy 601	NiCr23Fe	N06601	≤ 0,10	≤ 0,50	≤ 1,00	≤ 0,015	-	21,00 - 25,00	≤ 0,5	-	58,00 - 63,00	≤ 0,5	-
2.4856	Alloy 625	NiCr22Mo9Nb	N06625	0,03-0,10	≤ 0,50	≤ 0,50	≤ 0,015	-	20,00 - 23,00	≤ 0,5	8,00 - 10,00	≥ 58	≤ 0,4	-
2.4633	Alloy 602	NiCr25FeAlY	N06025	≤ 0,¨15	≤ 0,50	≤ 0,50	≤ 0,01	-	24,00 - 26,00	≤ 0,10	-	60,0 - 65,0	0,10 - 0,20	Al 0,15 - 0,60
2.4858	Alloy 825	NiCr 21 Mo	N08825	0,02	≤ 0,50	≤ 1,00	≤ 0,015	-	19,5 - 23,5	1,5-3,0	2,5 - 3,5	38,0 - 46,0	0,6 - 1,2	Fe Bal.
2.4602	Alloy C22	NiCr21Mo14W	N06022	≤ 0,01	-	-	-	-	20.00-22.50	-	12.5-14.5	50,00-63,00	0,60-1,20	-
2,4819	Alloy C276	NiMo16Cr15W	N10276	≤ 0,01	-	-	-	-	15,00-16,50	-	15,0-17,0	51,00-63,00	-	-

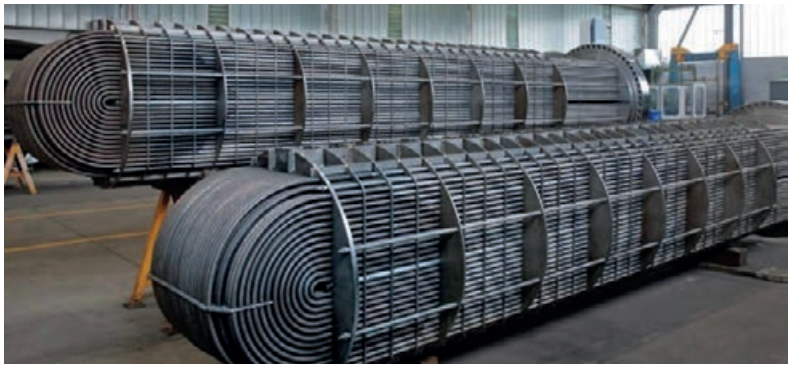
WELDED TUBES

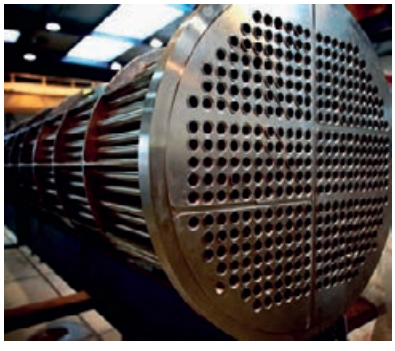
PROCESS AND CHARACTERISTICS

Since ZM Tubes is equipped with its own coil slitting line, it is fully flexible of modifying the final diameter at the very last moment. Strips are first formed along the width and then TIG (tungsten inert gas) or laser welded at the edges along the length. Welding is carried out without any filling material.
Strong corrosion resistance, precise forming, excellent roughness of surface even along the welding area are the keys to success that make ZM Tubes a world-class supplier for heat exchangers, evaporators, condensers and feed water heaters. We deliver both straight and U-bent tubes with a length up to 30 meters.

APPLICATIONS

- Conventional power stations
- Nuclear power stations
- Chemical and petrochemical plants
- Petroleum refineries
- Pulp & Paper
- Air treatment
- Food & Diary

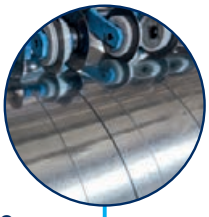




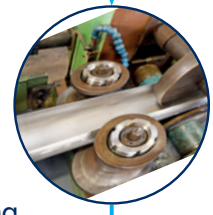
RANGE	DIAMETER		THICKNESS		LENGTH	
	mm	inch	mm	inch	mm	inch
Longitudinally welded stainless steel tubes	12 - 114.30	0.472 - 4.50	0.5 - 4.00	0.02 - 0.157	up to 30 m	up to 100 ft

On customer's request we can supply U-bent tubes.

WELDED TUBES PROCESS

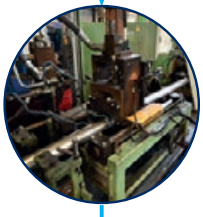


in-house
Coil Slitting



Forming

TIG Welding

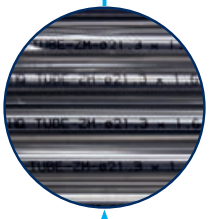


Bead
removing

Eddy Current
on-line

Annealing

Straightening



Marking

Eddy Current
off-line

Fixed Length
Cutting

Inspection

Chamfering

Test & quality
controls

Packing

Shipping

SEAMLESS TUBES

A new plant for the production of seamless stainless steel tubes was installed at ZM in 2021. The plant consists of cold pilger machines with an internal/external tube degreasing system integrated. We are developing an entire division dedicated to the seamless tubes in next few years. The new division, together with the increased production capacity of welded and re-drawn tubes, permits ZM to expand its range of stainless tubes, allowing it to become an established leader in the market for the comprehensiveness of the products offered.

APPLICATIONS

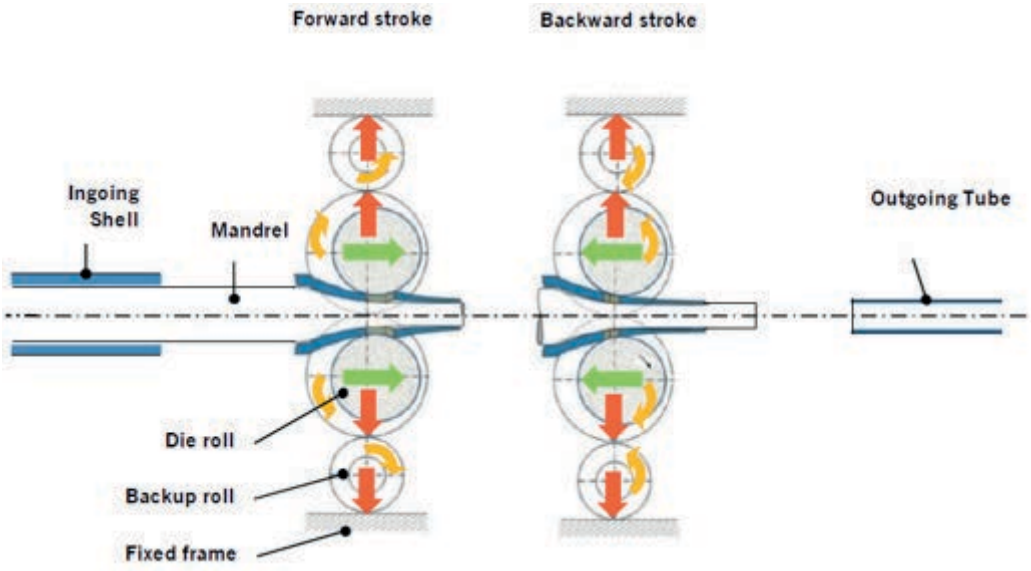
- Chemical and petrochemical plants
- Power stations
- Petroleum refineries
- Food and dairy
- Automotive and aerospace
- Pharma and chemical industry
- Mechatronics
- Pneumatic
- Oil & Gas
- Instrumentation
- Several critical industrial purposes

RANGE	DIAMETER		THICKNESS		LENGTH	
	mm	inch	mm	inch	mm	inch
Seamless stainless steel tubes	10 - 33.70	0.393 - 1,326	0.5 - 4.00	0.02 - 0.157	up to 24 m	up to 78,7 ft

On customer's request we can supply U-bent tubes.

SEAMLESS TUBES PROCESS

ROLLING BY COLD PILGER MACHINES

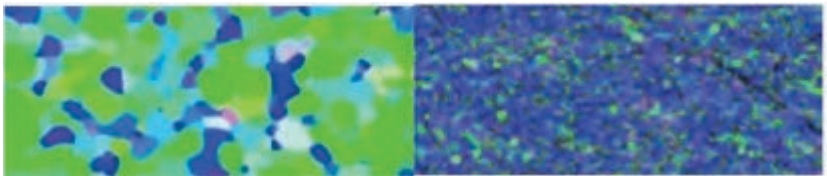


The two work rolls with the die groove, press forward and backward the shell against the mandrel to reduce to final dimension, cross section and tolerance.

TOLERANCE
Tight OD and ID tolerance with a very uniform WT

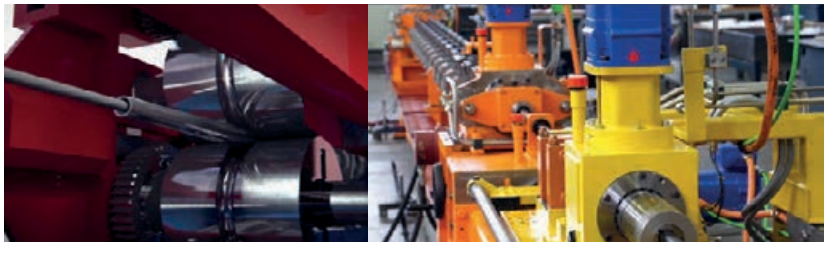
ECCENTRICITY
Reduced tube eccentricity

MICRO STRUCTURE
Fine and uniform grain structure, homogeneous material characteristics and improved mechanical properties



INLET HOLLOW BAR OUTLET FINAL TUBE

SURFACE ROUGHNESS
as per customer requirement external and/or internal Ra
< 0.8μm, <0.6μm, <0.4μm, < 0.25μm



REDRAWN TUBES

PROCESS AND CHARACTERISTICS

Precision is not a matter of chance at Zwahlen & Mayr!
Thanks to **40 years of "Swiss made" experience**, using highly skilled staff and continually investing in technological and solution improvements, we have managed to maintain our position at the highest level of redrawn precision technology.
Our mission is to produce state-of-the-art precision tubes, satisfying customer needs and developing worldwide long-term partnerships. Our stainless steel welded tubes are fully manufactured "in house" - from mother coil slitting up to standard welded tubes - which **guarantees constant mechanical parameters, specific surface roughness and tight dimensional tolerances**. These tubes then go through a special redrawing process in order to achieve extreme precise characteristics as:

- Narrow dimensional tolerances
- Ultra smooth surface with specific roughness outside and inside
- Specific mechanical values
- Very short tubes (min. 4 mm - 0.157 inch)

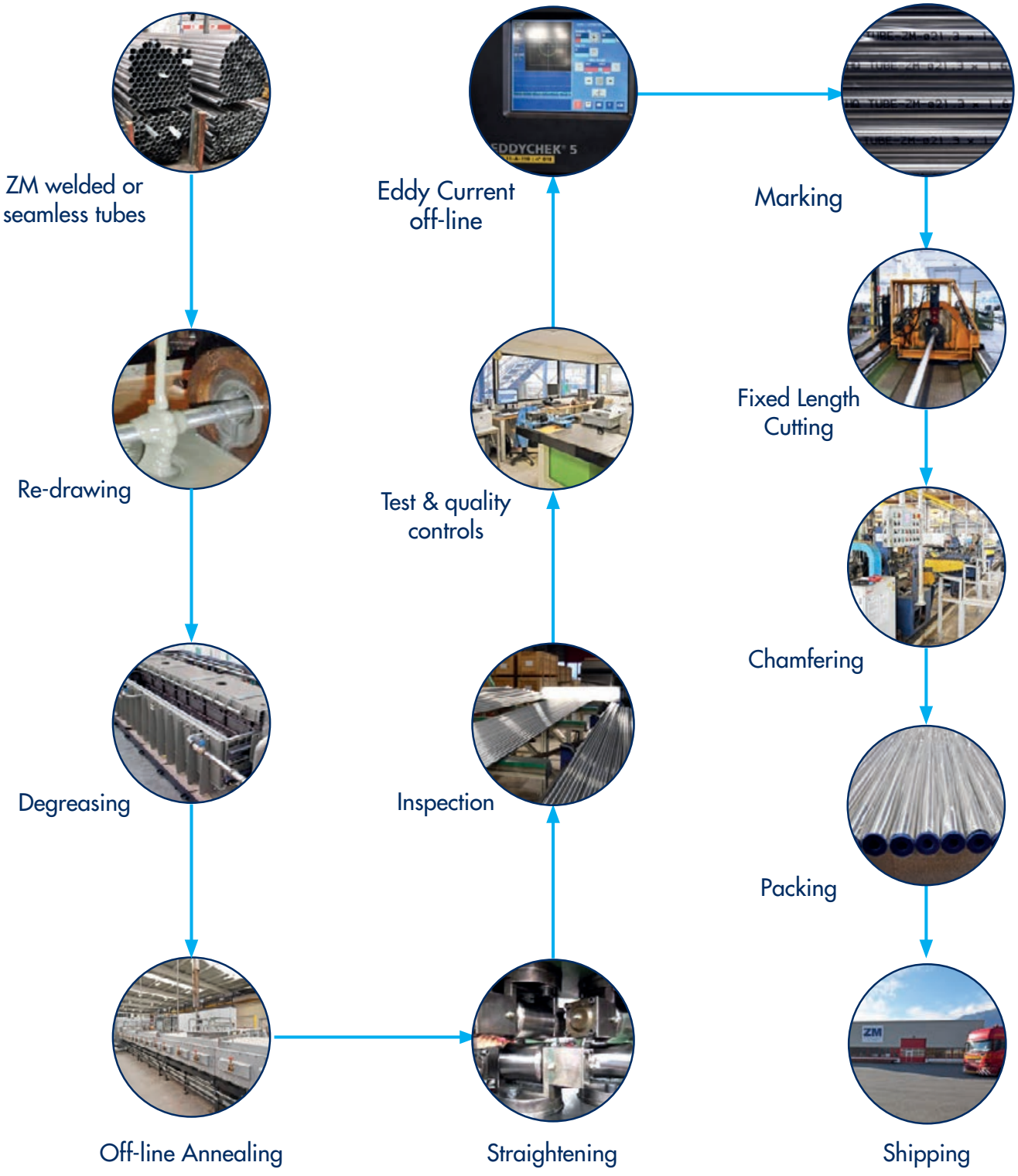
Outside surface tubes are supplied with different finish such as BA - bright annealed or polished

APPLICATIONS

- Automotive and aerospace
- Pharma, food and chemical industry
- Mechatronics
- Pneumatic
- Oil & Gas
- Instrumentation
- Several critical industrial purposes

RANGE	DIAMETER		THICKNESS		LENGTH	
	mm	inch	mm	inch	mm	inch
Re-drawn stainless steel tubes (welded and seamless)	5.00 - 105	0.196 - 4.13	0.30 - 3.00	0.01 - 0.118	lower than 4	down to 0.157

REDRAWN TUBES PROCESS



QUALITY CONTROL

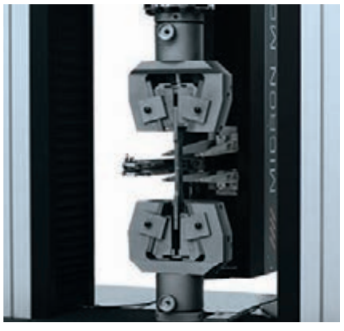
Inspection and tests are made in accordance with the execution standard. Samples are taken during the manufacturing process to carry out mechanical and metallurgical tests.
Tubes are always Eddy-Current tested:

- E-C on-line right after welding
- E-C off-line at the end of the production cycle.

All materials are supplied with work certificates according to EN 10204 3.1 or 3.2 (on request).
Tubes may be made available to third party inspection agencies such as TÜV or Lloyd's.

NON-DESTRUCTIVE TEST METHODS

- Ultrasonic test
- Eddy Current test
- Visual examination
- Endoscopic test
- Liquid penetrant test
- Hydrostatic test
- Pneumatic test
- Differential pressure test



MECHANICAL & TECHNOLOGIC TEST METHODS

- Hardness test
- Intergranular corrosion test
- Macrographic and micrographic examinations
- Measurement of ferrite content
- Measure of roughness
- Spectrometric chemical analysis
- Specific tests for the power plant industry

CERTIFICATIONS

ZM Tubes reputation is based on upscale products.

This quality is acknowledged by the main official agencies:

TUBES CERTIFICATIONS:

- PED 2014/68/EU
- TÜV AD 2000 W0
- IATF 16949
- TÜV PED 97/23/EC
- ISO 9001:2015
- ISO 14001:2015

In progress:

- ISO 45001
- ASME/BPE

STEEL CONSTRUCTION

OUR STAFF

- Sales division
- Projet Managers
- Engineering Department
- Production and Coating
- Quality and Controls Department
- Logistic
- Erection teams
- Administration office

PRODUCTION

- Plants and storages on large surface(in partnership with Cimolai Spa)
- High manufactur capacity per year
- High Lifting capacity
- Application of coating treatment

STUDY AND DESIGN

Our team and our tools:
- Engineers and designers
- Brand new IT
- Skills, experiences and references

Our advices:
Project step:
- Global solutions development

Execution step:
- Erection Optimization
- Erection concept

ERECTION

- Speed and flexibility
- Cost saving
- Precision and quality
- Security

MARKETS

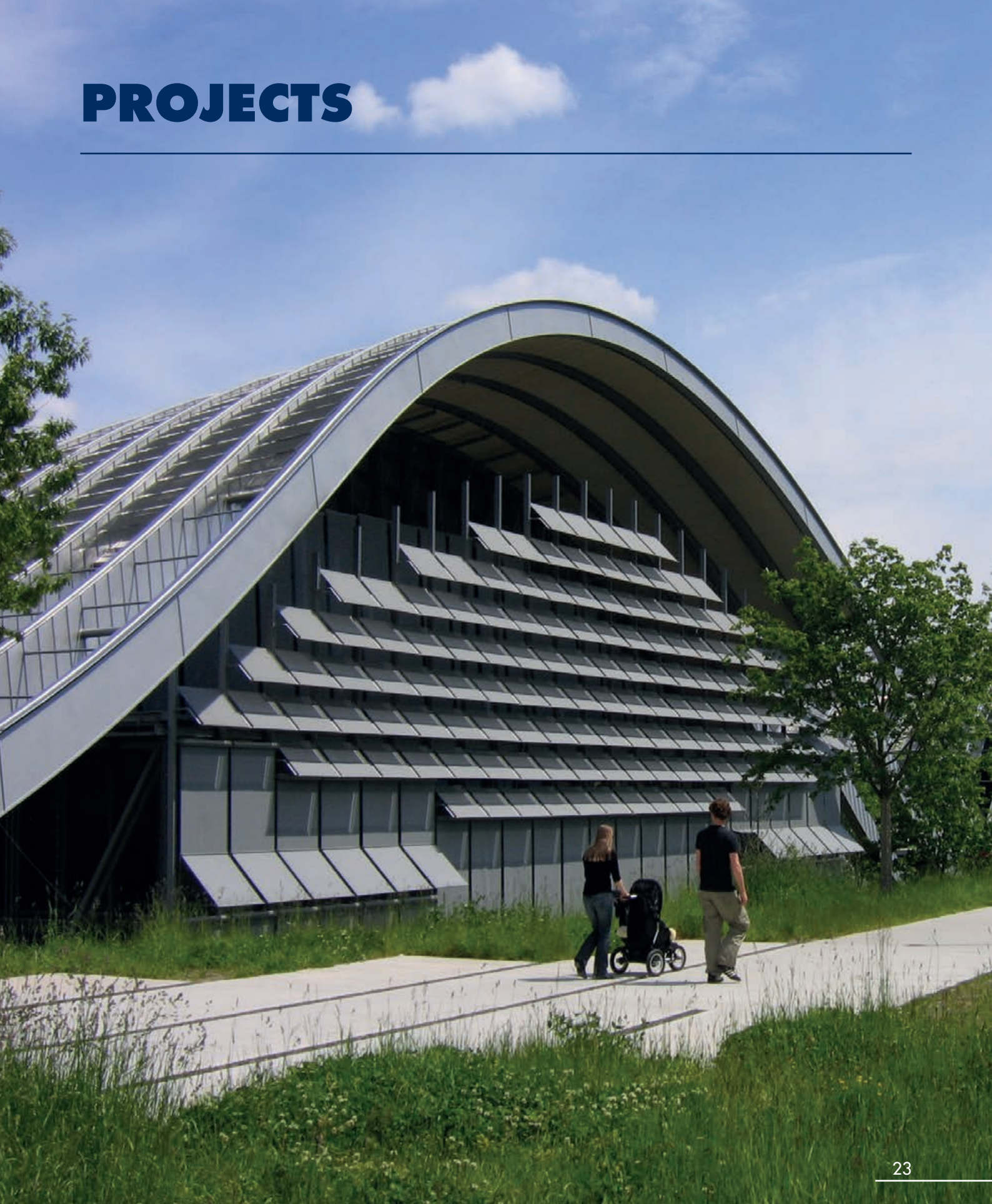

STADIUMS
AIRPORTS
Flughafen Zürich
PRIVATE BUILDINGS
PUBLIC BUILDINGS
BRIDGES

CERTIFICATIONS

STEEL CERTIFICATIONS:

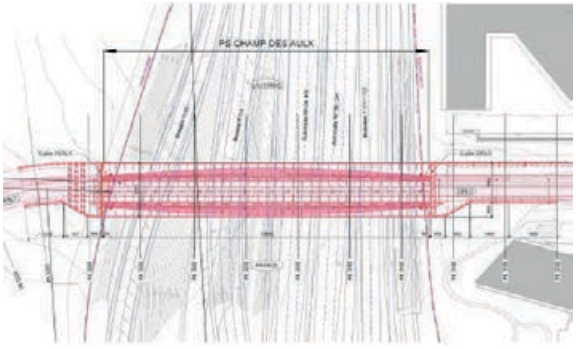
- EN 1090-1-EXC4
- ISO 3834-2
- ISO 9001:2015
- ISO 14001:2015

PROJECTS



PERLY BRIDGE
Geneva - Switzerland

Owner:	République et Canton de Genève
Architect:	Monod - Piguet + Associes Consulting Engineers
Dimensions:	width 4.75 m lane width for pedestrians and bicycles width 3.15 m lane for tram and bus
Description:	construction of a welded S355/460 steel 'Bowstring' arch bridge with a span of 125 m for the extension of tram line 15. ZM will supply all materials, fabricate the parabolic arches, central bridge, cantilever and appendages, pre-assemble the arches in the workshop, apply a C4 system and assemble the entire bridge on site.



ONE ROOF
Geneva - Switzerland

Owner: Banque Lombard Odier, Cie SA,
Gen. Contractor: Consortium CIII
Architect: Herzog & de Meuron
Dimensions: length 168 cm
width 74 cm
height 36 m
Description: lombard Odier Bank's new world headquarters in Bellevue. A total of 1,800 metal columns are supplied for all corridors. In addition to fabrication, a C2 duplex system is applied and shipment is from Italy.

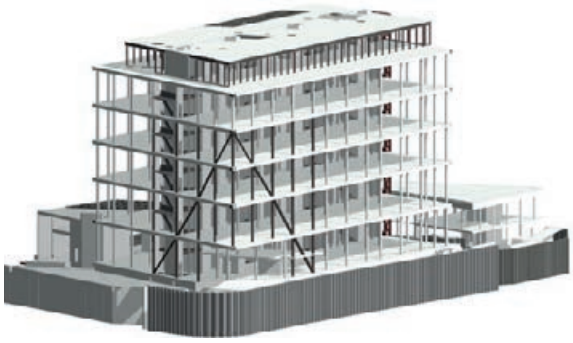

Image Courtesy of Herzog & de Meuron

EHL HOSPITALITY MANAGEMENT SCHOOL
Lausanne - Switzerland

Owner: EHL Real Estate SA
Architect: Itten + Brechbühl SA Lausanne
Gen. Contractor: TEKHNE SA et Dr. Lüchinger + Meyer Bauingenieure AG
Dimensions: 2.500 mq. Total weight approx. 390 t
Description: the extension of the hospitality academy includes a new structure between the existing academic buildings and the units on the new campus. This connection, culminating in a steel and glass roof (verrière), includes the new main entrance with reception area, a restaurant, kitchens, offices, a hall, swimming pool, spa and underground parking.

ROLEX ONYX
Geneva - Switzerland

Owner: Rolex SA
Architect: Brodbeck Roulet Architectes Associés SA
Engineer: Ingèni SA
Dimensions: 115 m x 52 m x 34 m (L x W x H).
Description: new ROLEX production unit in Chêne-Bourg. The steel structure and stairs will be supplied for the project. In addition to the supply of the material, the manufacturing of the various structures with the application of the C3 and R60 intumescent systems is also planned.



BRIDGE OVER THE RHONE RIVER
Bex - Switzerland

Owner: CFF
Architect: Monod - Piguet + Associes Consulting Engineers
Dimensions: tons: 4.500 t
total length: 945 m
height of main beams: 3.50 à 6.50 m
width of beams: 6.00 m
Description: method of construction: launch.

CEVA BRIDGE
Geneva - Switzerland

Owner: CFF, Ville de Geneve
Architect: BMS architectes
Gen. Contractor: SD ingénierie SA
Dimensions: length: 82 m
width: 10 m
height: 8.5 m
Description: design and implementation of the glass facade for a railway bridge.
The function of this glazing system is to reduce the noise nuisance on the environment and to protect the fauna along the Arve River.

TOURNANT BRIDGE
Geneva - Switzerland

Owner: S.I.G. Program Cheneviers IV
Gen. Contractor: ZM - Martì - JV
Dimensions: length: 30 m
width: 5 m
Description: the work consists of a moveable bridge (deck designed with orthotropic plate) used to connect two distinct areas of the park where the waste to energy plant in Geneva is located.
The mechanical part (about 30 tons) of the bridge has been completely engineered by Cimolai and ZM, introducing an innovative movement system.

POYA VIADUCT
Fribourg - Switzerland

Owner:	Etat de Fribourg
Architect:	GVH Tramelan SA
Designer:	GVH SA, Tramelan
Gen. Contractor:	Implenia Ltd
Dimensions:	length: 850 m
	width: 19 m
	height: 80 m
Description:	cable-stayed motorway viaducts.

FOOTBRIDGE OVER THE RHONE

Lyon - France

Owner:	Grand Lyon
Architect:	Dietmar Feichtinger
Designer:	Schlaich Gergemann und Partner
Gen. Contractor:	Zwahlen & Mayr - CBR TP(Vinci) - DR Citeos - Soletanche Bachy - JV
Dimensions:	length: 260 m span: 160 m width: 5 m - 8 m height: 8 m
Description:	lattice arch bridge.

RAYMOND BARRE BRIDGE

Lyon - France

Owner:	Sytral
Architect:	Alain Spielmann
Dimensions:	tons: 3,050 t
Description:	length: 264 m bridge dedicated to trams and soft mobility. The main span is a Bow-string. The two arches are inclined, the access spans, curved in plan, are made up of caisson beams with orthotropic slabs.

HANS WILSDORF BRIDGE
Geneva - Switzerland

Owner:	Fondation Hans Wilsdorf (Rolex)
Architect:	Brodbeck-Roulet SA
Designer:	Amsler & Bombelli
Gen. Contractor:	Zwahlen & Mayr
Dimensions:	tons: 1.500 t length: 85 m width: 17.6 m height: 7.9 m
Description:	Road bridge constructed of welded rings and spirals, joined around a spatial geometric tubular. Construction mounted on site by means of a continuous work platform below it.

ROLEX SA - PRODUCTION UNIT
Plan-Les-Ouates - Switzerland

Owner: Rolex SA
Architect: R. Brodbeck & Roulet SA
Gen. Contractor: Guscetti & Tournier
Dimensions: tons: 10.600
ground floor surface: 160.000 m2
Description: six buildings of 30 x 62.5 m with 6 floors above ground level, made entirely of metal structures. Flooring structure requiring resistance of 1'000 kg/m2, is a grid of sub-tied beams with a maximum rangeof 12.50 m. The core stabilisers (2 per building) have been made in steel following the principal of the Virerendeel beam.

PAUL KLEE CENTER
Bern - Switzerland

Owner: Fondation Zentrum Paul Klee
Architect: Renzo Piano - Paris
Dimensions: tons: 1,200
Description: steel framework with a complex geometry, composed of a succession of arches, forming the three hills of the Paul Klee centre.
All 400 arch sections were entirely made in composite-welded sections.
The largest of the three hills at 70m in length and 70m in width.

SWISS CONFEDERATION
Zurich - Switzerland

Owner: Allreal General Unternehmung
Architect: EM2N Architekten AG, Zürich
Dimensions: tons: 4,250
Description: rehabilitation of an industrial building into a Cantonal School of Art and rental housing.Addition of metal floors between the existing concrete floorsRaising the existing building with a 72m high metal structure tower.Works in an urban environment, not related to the railway sector.

THE FLOYD PROJECT HEADQUARTERS JTI
Geneva - Switzerland

Owner:	Japan Tobacco International
Architect:	Skidmore, Owings & Merril Inc. (SOM)
Designer:	Consortium Ingeni & SOM
Gen. Contractor:	Zwahlen & Mayr
Covered Area:	9,825 m²
Description:	the design, which ranks among the most sustainable buildings in Europe, consolidates four existing JTI premises within a single landmark building and demonstrates commitment to the search for integrated design, sustainability and innovation solutions for the workplace.

LEUTSCHENBACH
Zurich - Switzerland

Owner:	Amt für Hochbauten des Stadt Zürich
Architect:	Ch. Kerez, Zürich
Gen. Contractor:	DSP AG – Greifensee
Dimensions:	tons: 1,000
Description:	triangular steel structure
	length 45 m
	height 12.3, 4.35, 10.6 m.

ZENITH
Strasbourg - France

Owner: Communauté urbaine de Strasbourg
Architect: Massimiliano Fuckas - Paris
Dimensions: tons: 2.500 t
Description: load bearing structures of the auditorium constructed of 22 triangular beams radiating from a height of 7 m with a 100 m range.
Load bearing structures of the hall constructed of 22 portals in PRS and5 support hoops for the canvas facades, covering a surfaceof 2.000 m.

MMA ARENA
Le Mans - France

Owner:	Le Mans Stadium
	Vinci Construction (PPP)
Architect:	Cabinet Cardete et Huet Toulouse
Dimensions:	tons: 1.100.

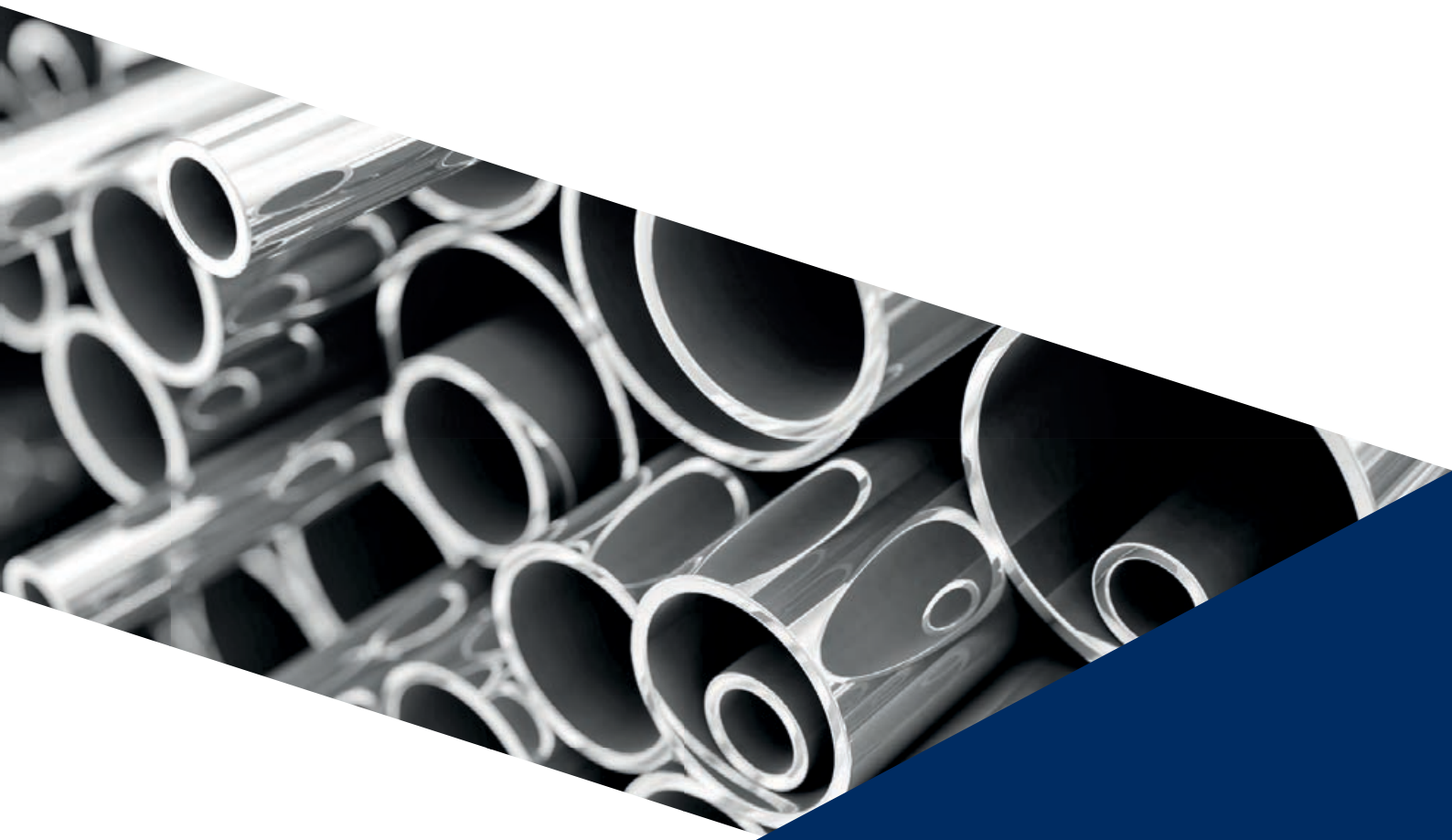
AUGUSTE DELAUNE STADIUM
Reims - France

Owner: Ville De Reims
Architect: Michel Rémon - Paris
Dimensions: tons: 1.500
Description: complex geometric welded structure
Labour intensive pieces up to 24 m in length and 5.5 m in width.

HALLE 6 PALEXPO
Geneva - Switzerland

Owner:	Fondation de la Halle 6
Architect:	Pierre-Alain Renaud Arch SA Mentha & Rosset Architects SA
Gen. Contractor:	Sumi-Babel-Petignat SA
Dimensions:	tons: 4,500 t dimensions: 200 x 120 m large steel triangular structure: 110 m x 8 m
Description:	complete assembly of structure on temporary props supported on platform over the motorway. Hoist of completely equipped roof (5'500 t) into its final position(approx. 18 m lift).

ZWAHLEN&MAYR SA



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