




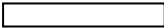



## Metallurgy in Switzerland (Iron and Steel)

### Competences available for ITER

#### Legend:

Each enterprise in the following table has a background color. The legend of colors is indicated below:

-  Casting facilities
-  Forging, drawing, rolling and metal billet working facilities
-  Distribution and Warehousing of raw materials
-  Boiler and sheet metal work, manufacturing
-  Surface treatment, annealing and hardening
-  Production of tools, casts, etc.
-  Engineering, services, quality and welding control

## Metallurgy in Switzerland (Iron and Steel)

### Competences available for ITER

Company (Parent company)	Subsidiary	Emplo- yees	Production facilities	Turnover [mio CHF]	Products / Services / Production volumes	further processes	remarks and particularities Contact person
Alfred Meili SA Constructions métalliques Route de Vannel CH-1880 Bex/VD T: +41 24 463 02 22 F: +41 24 463 02 33		65	<ul style="list-style-type: none"> <li>• Waterjet cutting, max. 6 x 3m, up to 100mm</li> <li>• Plasma cutting (with or without supply of the material) max. 6 x 3m, up to 100 mm thick (oxygen cutting)</li> <li>• Bending of pipes and steel sections</li> <li>• Folding, 500t x 6m</li> <li>• Sheet rolling</li> <li>• Manufacturing of serpentines from coils and pipes</li> <li>• Welding operations</li> <li>• Pickling, passivating</li> </ul>		<ul style="list-style-type: none"> <li>• Apparatus and complete Plants (pressure equipment and industrial hollow-ware - domestic hollow-ware - piping)</li> <li>• Machines designed and manufactured according to customer's specs</li> <li>• Paddle Dryers</li> <li>• Pressure and Vacuum Filters, filter dryers</li> <li>• Architecture, Decoration and Art Creations</li> <li>• Swimming pools in stainless steel</li> </ul>	<p>Material in stock</p> <ul style="list-style-type: none"> <li>• Stainless steel 1.4301 - 1.4306 - 1.4404 - 1.4435 - 1.4539 - 1. 4541 - 1.4571</li> <li>• Hastelloy - Alloy - Inconel - etc</li> </ul>	<a href="http://www.meilibex.ch/">http://www.meilibex.ch/</a> Denis Paquier <a href="mailto:d.paquier@meilibex.ch">d.paquier@meilibex.ch</a>
Alhenia AG Täferstrasse 39 CH-5405 Dättwil/AG T: +41 56 622 01 33 F: +41 56 622 36 59		35	<p>Surface treatment equipment</p> <p>General and precision machining (0 to 100kg) CNC 5 axis synchron milling machining</p>		<p>Medical implants and instruments</p> <p>Extended experience in Surface engineering (PVD plasma vapor deposition, atmospheric plasma spraying, VPS vacuum plasma spraying and cold gas)</p> <p>Plasma facing componenents</p>	<p>Supply raw mat. for metal and ceramic powders</p> <p>Coatings</p> <p>Machining special metals</p> <p>Component cleaning</p> <p>packaging in clean room ISO 6</p>	<a href="http://www.alhenia.com/">http://www.alhenia.com/</a> Armando Salito <a href="mailto:a.salito@alhenia.com">a.salito@alhenia.com</a>
Ateliers Clément SA Mécanique plastique Chemin Verdure 2 CH-1731 Ependes/FR T: +41 26 413 99 44 F: +41 26 413 99 45		40	<p>CNC lathes, CNC milling machines (3,4 and 5 axes, up to 4 x 4 x1,5 m), iterior and exterior grinding, planing, electro erosion, etc.</p>		<ul style="list-style-type: none"> <li>• Machining of components for aviation and space industries</li> <li>• Construction of apparatus and machines</li> <li>• Construction of swaging tools</li> <li>• Machining of drawing heads</li> <li>• Welding</li> </ul>	<p>Surface treatment of pieces (blackening)</p> <p>Engineering of production processes</p> <p>Extrusion of plastics</p>	<a href="http://www.ateliers-clement.ch/">http://www.ateliers-clement.ch/</a> Clément Camille <a href="mailto:cc@ateliers-clement.ch">cc@ateliers-clement.ch</a>
Benninger Guss AG Fabrikstrasse CH-9240 Uzwil/SG T: +41 71 955 88 00 F: +41 71 955 88 90			<p>Foundry</p>		<p>Cast Iron parts (rectangular, cylindrical, sheet, tubes, stretched forms from a few kg to ca. 5t</p>	<p>"Digital Casting" for individual, specially complex forms</p>	<a href="http://www.benningerguss.ch/">http://www.benningerguss.ch/</a> Eric von Ballmoos Eric.vonBallmoos@benningerguss.ch

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Company (Parent company)	Subsidiary	Emplo- yees	Production facilities	Turnover [mio CHF]	Products / Services / Production volumes	further processes	remarks and particularities Contact person
Bühler AG CH-9240 Uzwil/SG T: +41 71 955 11 11 F: +41 71 955 33 79	Bühler Druckguss AG 9240 Uzwil/SG T: +41 71 955 12 12 F: +41 71 955 25 88	300	Machine tools	100	Die Casting machines and peripheral equipment, Services	Machines for: <ul style="list-style-type: none"> <li>• Molten metal die casting</li> <li>• Magnesium die casting</li> <li>• Semi-solid metal casting (casting in a semi-molten, "dough-like" state)</li> <li>• Squeeze-casting (turbulence-free, slow filling of the die cavity)</li> <li>• Vacuum applications</li> </ul>	<a href="http://www.buhlergroup.com/">http://www.buhlergroup.com/</a> Cinzia Tiberi <a href="mailto:cinzia.tiberi@buhlergroup.com">cinzia.tiberi@buhlergroup.com</a>
Collini AG Ringstrasse 9 CH-8600 Dübendorf  T: +41 44 824 11 11 F: +41 44 821 11 12	Collini AG Dübendorf/Schweiz  Collini AG Biel/Schweiz  (Subsidiary of Collini Holding AG, Austria)	108  20  (1300)	Galvanize Hot dip zinc coat Plastic coating Galvanize with gold, silver, nickel, copper, etc. Anodize Powder coating	20.0  5.0  (210.0)	Metal coatings on metal and polymer substrates.  Corrosion protection, electrical properties, conductivity, optical enhancement, friction properties  Consulting, Training	Trademark processes: Collinox <sup>®</sup> , Optargen <sup>®</sup> , Tribor <sup>®</sup> , Galvatronic <sup>®</sup> , Pallatronic <sup>®</sup> , Triflon <sup>®</sup> , Niphoplate <sup>®</sup> , Pallodal <sup>®</sup> , Optalloy <sup>®</sup> , Skintech <sup>®</sup>	<a href="http://www.collini.eu">www.collini.eu</a> Dr. Hubert A. Braun <a href="mailto:hbraun@collini.eu">hbraun@collini.eu</a>
Eisengiesserei Ed. Mezger AG Fabrikstrasse 16 CH-3283 Kallnach/BE T: +41 32 391 74 44 F: +41 32 391 74 47		30+	Medium frequency electric induction oven, cap. 2,4t  Electric arc oven, capacity 9t		0,1 to 2'000kg components: <ul style="list-style-type: none"> <li>• Spheroid graphite iron</li> <li>• High temperature resistant casting with spheroid graphite (SiMo)</li> <li>• ADI Castings (spheroid graphite iron) Bainite struct</li> <li>• Cast iron with blade type graphite</li> </ul>	Machining (milling, lathing, surface grinding, welding)  QC: spectral analysis of 16 elements, metallurgic analyses, ultrasound tests, mechanical tests, 3D measurement reports	<a href="http://www.mezgergroup.com/">http://www.mezgergroup.com/</a> Georges Roschi <a href="mailto:roschi@mezgergroup.com">roschi@mezgergroup.com</a>
vonRoll infratec (holding) ag Bahnhofstrasse 23 CH-6300 Zug T: +41 41 720 01 05	FMG SA Fonderie de Moudon Place de la Gare 19 1510 Moudon/VD T: +41 21 905 80 00 F: +41 21 905 80 20	50	<u>Hand molding foundry</u> <ul style="list-style-type: none"> <li>• 4 induction furnaces (capacities: 2 × 8 t, 2 × 1.5 t)</li> <li>• Casting pit: 23m × 5m × 3m</li> </ul> Heat treatment		Annual production: 4'000 t Weight of castings: 250 to 12'000 kg	Grades: Cast iron <ul style="list-style-type: none"> <li>• with lamellar graphite, EN-GJL-100 to EN-GJS-350</li> <li>• with nodular graphite from EN-GJS-350 to EN-GJS-900</li> <li>• Si-, Mo-alloyed up to EN-GJS-XSiMo5-1</li> <li>• Ni-alloyed (Ni-Resist) up to EN-GJS-XNiSiCr35-5-2</li> <li>• Austempered ductile iron (ADI), EN-GJS-800-8 to EN-GJS-1400-1</li> </ul>	<a href="http://www.fmgsa.ch/">http://www.fmgsa.ch/</a> Georges Rossier <a href="mailto:georges.rossier@fmgsa.ch">georges.rossier@fmgsa.ch</a>

## Metallurgy in Switzerland (Iron and Steel)

### Competences available for ITER

Company (Parent company)	Subsidiary	Emplo- yees	Production facilities	Turnover [mio CHF]	Products / Services / Production volumes	further processes	remarks and particularities Contact person
François Studer - Trempera SA Rue de la Source 2 CH-2822 Courroux/JU T: +41 32 424 43 30 F: +41 32 422 31 72		50+	100 installations for performing all kinds of heat treatments, incl. hardening, annealing, carbonizing, nitriding, nitrocarburizing		Heat treatment on all entrusted components	Sand polishing, blackening, phosphatizing,	<a href="http://www.studertrempera.ch">http://www.studertrempera.ch</a> François Studer <a href="mailto:info@studertrempera.ch">info@studertrempera.ch</a>
Frewitt Fabrique de Machines SA Route du Coteau 7 CH-1763 Granges- Paccot/FR T: +41 26 460 74 00 F: +41 26 460 74 01		90	Shop floor completely equipped for bending, cutting, polishing and welding stainless steel for producing equipment for the pharmaceutical industry.		Stainless steel milling (production of powders) and conditioning machines for the pharmaceutical industry.  Production of complex components in stainless steel.	Frewitt printing: security marking systems (laser printing on glass) for product traceability	<a href="http://www.frewitt.com/">http://www.frewitt.com/</a> Charles Phillot <a href="mailto:ch.phillot@frewitt.com">ch.phillot@frewitt.com</a>
Frewitt Fabrique de Machines SA Route du Coteau 7 CH-1763 Granges- Paccot	FreNuc SA Route du Coteau 7 CH-1763 Granges- Paccot T: +41 26 460 74 00 F: +41 26 460 74 01	105	<b>Under Nuclear QA Program</b> in compliance with: • 10 CFR50, Appendix B • ITER requisits GS-R-3  <b>Manufacturing of medium to large components involving:</b> • Machining • Fabrication • Welding • Assembly  <b>Materials processed:</b> • Stainless steel • Hastelloy C-22 • Titanium • Beryllium *  * Beryllium participation will be based upon volume of work and economic feasibility	22	<b>Under Nuclear QA Program</b> in compliance with: • 10 CFR50, Appendix B • ITER requirements GS-R-3  <b>Nuclear services:</b> • Engineering • Customized staff augmentation (mechanical design, civil RCC and structural, software development & implementation) • QA and QC • QA Audits • Supplier qualification audits • Fabrication inspection  <b>Nuclear consulting:</b> • Establish Nuclear QA Program • Training for Nuclear QA Program  <b>Supply of products:</b> High quality machined fabricated parts and assemblies	<b>Assist the Manufacturers</b> within non-nuclear program compliance for manufacturing per: • 10 CFR50, Appendix B • ITER GS-R-3 Standards  <b>Raw material procurement:</b> • Approved Supplier List • Receipt inspection  <b>Material traceability:</b> • CMTR • PMI • Segregation  <b>Manufacture under:</b> • In process inspection • Hold points  <b>Non-conformity:</b> • Reporting • Client resolution  <b>Final tests</b>  <b>Certificate of Conformity</b>	Sam Reddy <a href="mailto:s.reddy@frenuc.com">s.reddy@frenuc.com</a>  FreNuc SA is a Nuclear qualified vendor for MOX project in USA  All manufacturing for ITER at FreNuc SA will be performed to Nuclear QA Program  FreNuc SA can assist other Manufacturers to comply with Nuclear QA Program  FreNuc SA QA Program complies with GS-R-3 inclusive : • 10 CFR50, Appendix B • 10 CFR50, Part 21 • NQA-1 • IAEA 50-C-Q • IAEA GS-R-3 • KTA 1401

## Metallurgy in Switzerland (Iron and Steel)

### Competences available for ITER

Company (Parent company)	Subsidiary	Emplo- yees	Production facilities	Turnover [mio CHF]	Products / Services / Production volumes	further processes	remarks and particularities Contact person
H. Bieri Engineering GmbH Sulzer-Allee 27 CH-8404 Winterthur T: +41 52 262 70 80 M:+41 79 672 43 52			In narrow cooperation with partners:  Machining and welding tool park for precision works on sophisticated high quality equipment made in Alu, stainless steels, Ni alloys, Ti, Cu materials		<ul style="list-style-type: none"> <li>• Complete Engineering and design</li> <li>• Consulting services</li> <li>• Pressure vessels</li> <li>• Vacuum vessels/Cryostats</li> <li>• Heat exchangers</li> <li>• Cryogenic units</li> <li>• High temperature equipment</li> <li>• High quality and cleanliness requirements</li> <li>• Prototypes</li> <li>• Special welding services</li> </ul> <ul style="list-style-type: none"> <li>• Alternative energy production / hydrogen storage / mobile applications etc.)</li> </ul>	Special welding techniques <ul style="list-style-type: none"> <li>• special proprietary low shrinkage TIG-welding</li> <li>• Plasma welding</li> </ul> In cooperation with partners <ul style="list-style-type: none"> <li>• Laser welding</li> <li>• Electron beam welding</li> <li>• complete non destructive and destructive testing</li> </ul>	<a href="http://www.bieri-ing.ch">www.bieri-ing.ch</a> Hans Bieri <a href="mailto:h.bieri@bieri-ing.ch">h.bieri@bieri-ing.ch</a> <a href="mailto:bieri.ing@bluewin.ch">bieri.ing@bluewin.ch</a>  Main industries served: <ul style="list-style-type: none"> <li>• Institutes for particle research, space research, general research and superconductor industry.</li> <li>• Hydro, thermal and nuclear power plants</li> <li>• Petro-, petrochemical and chemical industries</li> <li>• Food and pharmaceutical industries</li> <li>• Alternative energy projects</li> </ul>
Hans Kohler AG Claridenstrasse 20 CH-8022 Zürich T: +41 44 207 11 11 F: +41 44 207 11 10			Distributor of stainless steel components and all high grade alloys		Tubes, sheet, stabs, screws, etc. in stainless steel and high grade alloys	Identification on world-wide basis of special materials	<a href="http://www.kohler.ch/flash.html">http://www.kohler.ch/flash.html</a> Hans R.Kohler <a href="mailto:mail@kohler.ch">mail@kohler.ch</a>
Imbach & Cie AG Stämpelfeld 9 CH-6244 Nebikon/LU T: +41 62 748 44 44 F: +41 62 748 44 40		90	Specialist for solutions in metal, combining our production technologies: <ul style="list-style-type: none"> <li>• Open-die forging</li> <li>• Drop forging</li> <li>• Ring rolling</li> <li>• Heat treatment</li> <li>• High precision machining: Lathing, milling, drilling</li> <li>• Assembling</li> </ul>		<u>Products:</u> Ready-to-install metal components: <ul style="list-style-type: none"> <li>• Forged and seamless rolled rings, bushings, tubes and disks</li> <li>• Forged shafts, plates etc.</li> <li>• Drop forgings</li> </ul> <u>Services:</u> <ul style="list-style-type: none"> <li>• Raw material planning</li> <li>• Forging and ring rolling</li> <li>• High precision machining</li> <li>• Assembling</li> </ul>	<ul style="list-style-type: none"> <li>• Non-destructive testing</li> <li>• Destructive testing</li> <li>• 3-D measuring machine</li> </ul>	<a href="http://www.imbach.com/">http://www.imbach.com/</a> Martin Imbach <a href="mailto:martin.imbach@imbach.com">martin.imbach@imbach.com</a>  Wide range of material expertise: Steels (120 types on stock), aluminium, nickel, titanium, copper

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Jean Gallay SA Chemin Pont-du- Centenaire 108 CH-1228 Plan-les- Ouates T: +41 22 794 77 66 F: +41 22 884 98 05		190	Sheet metal works, manufacturing of super alloy components, for: <ul style="list-style-type: none"> <li>• Nuclear reactors</li> <li>• Industrial gas turbines</li> <li>• Aircraft engines</li> </ul>	29 (2009)	<u>Core Competences :</u> <ul style="list-style-type: none"> <li>• Brazing (manual or under vacuum)</li> <li>• Coating (TBC, chrome carbides, HVOF)</li> <li>• Forming (hydraulic press shop)</li> <li>• Vacuum heat treatment</li> <li>• Inspection (FPI, X-ray, MPI, micrographic, ultrasonic)</li> <li>• Machining (NC, EDM, Laser YAG)</li> <li>• Testing (Flow and pressure testing)</li> <li>• Welding (TIG, Plasma, Electron Beam)</li> </ul>	<u>Matériel expertise :</u> Heat resistant alloys, High-grade alloys: <ul style="list-style-type: none"> <li>• Hastelloy-X</li> <li>• Inconel</li> <li>• Nimonic</li> <li>• Stainless steel</li> <li>• Titanium</li> <li>• Aluminum</li> <li>• Thickness up to 5 mm</li> <li>• Dimensions to 2000 mm</li> </ul> <ul style="list-style-type: none"> <li>• AREVA's approved supplier</li> </ul>	<a href="http://www.jean-gallay.ch">www.jean-gallay.ch</a> Laurent LECOEUR – Key Account Manager <a href="mailto:llecœur@jean-gallay.ch">llecœur@jean-gallay.ch</a> Direct tel.: +41 22 884 94 13
Kasag Langnau Hohgantweg 4 CH-3550 Langnau im Emmental T: +41 34 408 58 58 F: +41 34 408 58 59		40	Welding machines, surface treatment, plasma cutting, bending (to 2 x 4m, 30mmthick) etc.	8	High quality metal working and welding of stainless steel and aluminum alloys for food and pharmaceutical industries, incl. pressure vessels and heat exchangers  MIG, MAG, TIG, Plasma, Orbital welding.	Engineering and studies  Testing <ul style="list-style-type: none"> <li>• Pressure tests</li> <li>• Radiation tests</li> <li>• Coloring tests</li> <li>• Surface smoothness tests</li> <li>• Ferrite measurements</li> </ul>	<a href="http://www.kasag.ch">http://www.kasag.ch</a> Gerber Thomas <a href="mailto:t.gerber@kasag.ch">t.gerber@kasag.ch</a>
Kompaflex AG Amriswilerstrasse 92 CH-9314 Steinebrunn T: +41 71 414 71 00 F: +41 71 414 71 10		50	All machine tools required to produce single layer and multilayer, circular or rectangular bellows		Bellows for the most stringent requirements and environ- ments (hi and lo temps, hi and lo pressures, incl. ultra high vacuum)	Design and engineering of compensators to customer requirements	<a href="http://www.kompaflex.ch">www.kompaflex.ch</a> Werner Löhner <a href="mailto:w.loehrer@kompaflex.ch">w.loehrer@kompaflex.ch</a>
L. Biaggio SA Rte. du Stand 15 CH-1163 Etoy/VD T: +41 21 807 34 92 F: +41 21 807 30 09		14	Machine tool park (3 and 4 axes) for precision machining: lathing, milling, drilling, boring, grinding and cutting.		<ul style="list-style-type: none"> <li>• Machining of components for space, machines, electrical, railway and packaging industries.</li> <li>• Production volumes vary from 1 to 5000 pieces.</li> </ul>	3D measurement	<a href="http://www.biaggiosa.com/">http://www.biaggiosa.com/</a>  Patrick Romeda <a href="mailto:p.romeda@biaggiosa.com">p.romeda@biaggiosa.com</a>  Didier Romeda <a href="mailto:d.romeda@biaggiosa.com">d.romeda@biaggiosa.com</a>

## Metallurgy in Switzerland (Iron and Steel)

### Competences available for ITER

Company (Parent company)	Subsidiary	Emplo- yees	Production facilities	Turnover [mio CHF]	Products / Services / Production volumes	further processes	remarks and particularities Contact person
Lamineries Matthey SA Rte de Neuchâtel 6 CH-2520 La Neuveville T: +41 32 752 32 32 F: +41 32 752 32 00			<b>Cold precision rolling</b> installations <ul style="list-style-type: none"> <li>• 9 rolling mills with 2 to 20 rolls</li> <li>• 7 levelling machines</li> <li>• 2 stretch-bend levellers</li> <li>• Numerous pot-type annealing furnaces</li> <li>• 6 continuous strand furnaces</li> <li>• Brush and polishing machines, etc.</li> </ul>		<ul style="list-style-type: none"> <li>• Cold-rolled thin strips and foils, thicknesses from 0.005 to 1 mm at widths from 1.5 to 230 mm</li> <li>• Rods, wires and tubes</li> <li>• Broad product range with thicknesses of up to 3 mm at a width of max. 500 mm</li> </ul>	Specialty alloys: <ul style="list-style-type: none"> <li>• beryllium copper</li> <li>• maraging steels</li> <li>• nickel alloys</li> <li>• titanium</li> </ul> Test laboratory	<a href="http://www.matthey.ch">www.matthey.ch</a> Juerg Haefeli <a href="mailto:jh@matthey.ch">jh@matthey.ch</a>
Méca-Test Giannino Scampa SA Chemin Barde 5 CH-1219 Le Lignon/GE T: +41 22 794 14 80 F: +41 22 794 74 70			<ul style="list-style-type: none"> <li>• Turning</li> <li>• Milling</li> <li>• Electroerosion</li> <li>• polisher</li> <li>• Assembly</li> <li>• Tig welding</li> </ul>		Products for the following industries: space, jewellery, watch-making, biochemical, precision mechanics, medical, prototypes and scientific community	<ul style="list-style-type: none"> <li>• Vacuum testing</li> <li>• Zeiss Vista control</li> </ul>	<a href="http://www.meca-test.ch">http://www.meca-test.ch</a> Yann Floreau <a href="mailto:yfloreau@meca-test.ch">yfloreau@meca-test.ch</a>
Medelec-Minimeca SA Route de Chardonne CH-1070 Puidoux/VD T: +41 21 946 04 80 F: +41 21 946 04 85			Complete machine park for producing the specialty products required by the medical and watch-making industries		High-precision metal tubes, from 0,1 to 10mm ext. diam, from 0,015 to 1mm wall thickness in stainless steel and precious metals		<a href="http://www.medelec-tubes.com/">http://www.medelec-tubes.com/</a> Marc Butty <a href="mailto:marc@medelec-tubes.com">marc@medelec-tubes.com</a>
Montanstahl SA Via Gerrette 4 Casella postale 562 CH-6855 Stabio/TI T: +41 91 647 11 41 F: +41 91 647 37 18		200	Hot rolling mill Cold rolling mills Laser welding lines Cold drawing benches Press fit lines		Special and standard profiles in stainless, carbon or alloyed steel grades		<a href="http://www.montanstahl.com/">http://www.montanstahl.com/</a> Maurizio Cosmai <a href="mailto:M.Cosmai@montanstahl.com">M.Cosmai@montanstahl.com</a>
Nottaris AG Bahnhofstrasse 2 CH-3414 Oberburg b. Burgdorf T: +41 34 427 07 07 F: +41 34 427 07 08		60	<b>Cast iron</b> , cast iron parts from 0,1 to 2'500 kg		Components for machine tools, printing machines, pumps, compressors, etc.  Annual capacity of 3'000 t	Materials: <b>Cast iron</b> , <ul style="list-style-type: none"> <li>• with lamellar graphite, from EN-GJL-150 to EN-GJL-300</li> <li>• with nodular graphite, from EN-GJS-350 to EN-GJS-800</li> <li>• Bainitic cast iron (ADI)</li> </ul>	<a href="http://www.nottaris.ch/">http://www.nottaris.ch/</a> François Nottaris <a href="mailto:info@nottaris.ch">info@nottaris.ch</a>

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Notz Metall AG Bernstrasse 24 CH-2555 Brugg T: +41 32 366 75 55 F: +41 32 366 77 34			Distributor of high quality steels in sheets, tubes, and bars.  Basic operations on parts: cutting, rolling, milling, straightening		Stock and delivery of a vast number of stainless steels and a complete range of free cutting steels and metals	Laboratory services for determining and confirming product specifications (hardness, composition, etc.)	<a href="http://www.notzmetall.ch/">http://www.notzmetall.ch/</a> Nico Issenmann <a href="mailto:nico.issenmann@notz.ch">nico.issenmann@notz.ch</a>
P & S Vorspann- systeme AG Rietwiesstrasse 2 CH-8735 St. Gallen- kappel T: +41 55 284 64 64 F: +41 55 284 64 69	(Subsidiary in Germany: P&S Vorspannsysteme GmbH Minnefeld 4 DE-64807 Dieburg T: +49 6071 301 666 F: +49 6071 301 938)	50	Machine tools, assembly	14	Superbolt, tensioners for the heavy industry, bolting equipt.  Applications: compressors, presses, shipbuilding, hydro and thermal power, steel In- dustry, mining, petrochemistry	Engineering	<a href="http://www.p-s.ch">www.p-s.ch</a> Roman Germann <a href="mailto:r.germann@p-s.ch">r.germann@p-s.ch</a>
W. Blösch AG Moosstrasse 68-78 CH-2540 Grenchen/SO T: +41 32 654 26 26 F: +41 32 654 26 36	PLATIT AG, Advanced Coating Systems Eichholz St. 9 CH-2545 Selzach / SO T: +41 32 544 62 10 F: +41 32 544 62 20		Machine park for producing PVD coating equipment.		PVD Coating equipment PVD coatings for ultra vacuum applications, for wear & corrosion protection	Development of custom made PVD - PECVD processes for specific applications based on Arc & Sputtering technology  Engineering of vacuum chambers and software supervision.	<a href="http://platit.com/">http://platit.com/</a> , <a href="http://www.bloesch.ch/">http://www.bloesch.ch/</a> Christian Galamand <a href="mailto:c.galamand@platit.com">c.galamand@platit.com</a>
Precicast SA Fusioni di precisione Via Résiga 6 CH-6883 Novazzano/TI T: +41 91 695 77 11 F: +41 91 695 77 12		500	Cast iron facilities up to 1,5 x 1,5m and 250kg melting weight	130	Castings in <b>super alloys</b> with equiaxed structure, directional solidification and single cristal  Ni-and Co based alloys Steels	Engineering services Quality assurance and inspection services	<a href="http://www.precicast.com/">http://www.precicast.com/</a> Giuliano Colonnella <a href="mailto:info@precicast.com">info@precicast.com</a>
Program SA Chemin de Bellevue 3 CH-1197 Prangins/VD T: +41 22 990 33 00 F: +41 22 990 33 01		10	8 milling machines, with at the most 5 axes  5 lathes, 3 grinding machines, etc.		Production of structurally complicated components	CATIA programming  Assembly and mounting of components  Metrology	<a href="http://www.programsa.ch">www.programsa.ch</a> Christophe Dumoulin <a href="mailto:cdumoulin@programsa.ch">cdumoulin@programsa.ch</a>
Romabau-Gerinox AG Fohlenweide 8570 Weinfelden/TG T: +41 71 626 95 95 F: +41 71 622 21 32		50	Machines (milling, lathes), plasma cutting, ultrasound cleansing, pickling, He leak testing		Realization of components and installations in the fields of pressure vessels, vacuum technology and welding constructions	Installation for cryogenic applications (4° K)	<a href="http://www.romabau-gerinox.ch">www.romabau-gerinox.ch</a> Stefano Langone <a href="mailto:s.langone@romabau-gerinox.ch">s.langone@romabau-gerinox.ch</a>



## Metallurgy in Switzerland (Iron and Steel)

### Competences available for ITER

Company (Parent company)	Subsidiary	Emplo- yees	Production facilities	Turnover [mio CHF]	Products / Services / Production volumes	further processes	remarks and particularities Contact person
Ruag Schweiz AG Seetalstrasse 175 CH-6032 Emmen T: +41 41 268 41 11 F: +41 41 268 20 21		500	<b>Range of expertise:</b> all major aspects of a space project, from mission analysis to manufacturing, assembly and integration  <b>Mechanical engineering:</b> plant engineering and mechanical working of large parts (turning, milling, drilling, boring, grinding, eroding, honing, welding).		Spacecraft structures, high precision mechanisms, scientific instruments for space applications	Surface coatings: chemical, electrolytic, electrochemical, tribological and lacquering	<a href="http://www.ruag.com/space/RUAG_Space_Switzerland">http://www.ruag.com/space/RUAG_Space_Switzerland</a> Kurt Grüter <a href="mailto:kurt.grueter@ruag.com">kurt.grueter@ruag.com</a>
Sametec SA Route de la Drague 65 CH-1951 SION T: +41 27 322 90 84 F: +41 27 323 29 68			Fully equipped mechanical workshop (milling, turning, boring, grinding, etc.)		High precision execution of complex pieces of high added value executed in steel, stainless steel, copper and aluminum		<a href="http://www.sametec.ch">http://www.sametec.ch</a> Grégoire Iten <a href="mailto:direction@sametec.ch">direction@sametec.ch</a>
Schmelzmetall AG Fabrikstrasse Postfach 45 CH-6482 Gurtellen T: +41 41 886 80 40 F: +41 41 886 80 41		120	1500 kg and 550 kg vacuum furnaces		Precipitation hardened Copper alloys with nickel, cobalt, chrome, beryllium, zircon  Aluminium-bronzes with copper, aluminium, iron and nickel  Sheet, wire, rods, drawn rods, forged rods, drawn and forged plates	heat treatment systems	<a href="http://www.schmelzmetall.com/">http://www.schmelzmetall.com/</a> Jürgen Barz <a href="mailto:juergen.barz@schmelzmetall.com">juergen.barz@schmelzmetall.com</a>
SCHMOLZ & BICKENBACH AG Emmenweidstrasse 90 6020 Emmenbrücke T: +41 41 209 50 00 F: +41 41 209 51 04	<b>Swiss Steel AG</b> Emmenweidstr. 90 CH-6020 Emmenbrücke T: +41 41 209 51 51 F: +41 41 209 52 55	450	80 t electrical arc furnace (EAF) 80 t ladle furnace (LF) 4-strand continuous casting machine (CCM) for billets 160/160 mm  Rolling mill, single strand, for wire and bars, diam. 5 - 70 mm, round and hexagonal		565'000 t • General structural steel • Heat treatable steel • Case hardening steel • Free-cutting steel • Steels with improved cold forming properties • Micro alloyed steel • Chain steel • Construction / Mining (Top12 and Top700)	Wire rods supplied in following executions • untreated • pickled • annealed • phosphated	<a href="http://www.swiss-steel.com/">http://www.swiss-steel.com/</a> Walter J. Hess <a href="mailto:wihess@swiss-steel.com">wihess@swiss-steel.com</a>  Swiss Steel (formerly von Moos Stahl) was established 1842. Swiss Steel became part of Schmolz + Bickenbach group in 2003

## Metallurgy in Switzerland (Iron and Steel)

### Competences available for ITER

Company (Parent company)	Subsidiary	Emplo- yees	Production facilities	Turnover [mio CHF]	Products / Services / Production volumes	further processes	remarks and particularities Contact person
SCHMOLZ & BICKENBACH AG Emmenweidstrasse 90 6020 Emmenbrücke T: +41 41 209 50 00 F: +41 41 209 51 04	<b>Steeltec AG</b> Emmenweidstr. 72 6020 Emmenbrücke T: +41 41 209 63 63  Steeltec AG Salen 9536 Schwarzenbach T: +41 71 929 94 94	260	Production of bright steel (drawing)		High-strength special steels, case-hardening steels and special free-cutting steels		<a href="http://www.steeltec.ch/">http://www.steeltec.ch/</a> Gerd Münch <a href="mailto:info@steeltec.ch">info@steeltec.ch</a>
SCHMOLZ & BICKENBACH AG Emmenweidstrasse 90 6020 Emmenbrücke T: +41 41 209 50 00 F: +41 41 209 51 04	SCHMOLZ + BICKENBACH <b>Stahlcenter AG</b> Industriestrasse 18 9552 Bronschhofen T: +41 71 913 63 63 F: +41 71 913 63 90	90	Warehouse and distribution		All steels for construction and automotive industries  Bright steel, special steel, stainless steel in bars and tubes	Sawing	<a href="http://www.schmolz-bickenbach.ch/">http://www.schmolz-bickenbach.ch/</a> Peter Breitenmoser <a href="mailto:p.breitenmoser@schmolz-bickenbach.ch">p.breitenmoser@schmolz-bickenbach.ch</a>  Schmolz + Bickenbach Stahlcenter AG is one of the distribution centers of the group for Switzerland
Stadler Stahlguss AG Johann-Renfer-Strasse 51-55 CH-2504 Biel T: +41 32 344 45 00 F: +41 32 344 45 10			Cast Iron facilities			Largest dimensions: 3300 x 3300 x 1500 mm Weight: from 15 to 3'500 kg	<a href="http://www.stadlerstahlguss.ch">www.stadlerstahlguss.ch</a> Detlef Windisch <a href="mailto:detlef.windisch@stadlerstahlguss.ch">detlef.windisch@stadlerstahlguss.ch</a>
Sulzer Chemtech AG Sulzer-Allee 48 8400 Winterthur T: +41 52 262 11 22 F: +41 52 262 00 60		2'500	All the machine tools and treatment processes necessary for producing and assembling the chemical plants (see the column "Products and Services")		Mass transfer technology (columns, towers, trays, separators)  Mixing and reaction technology		<a href="http://www.sulzerchemtech.com">www.sulzerchemtech.com</a> Beat Badertscher, Application Manager <a href="mailto:beat.badertscher@sulzer.com">beat.badertscher@sulzer.com</a>
Sulzer Metco Management AG Zürcherstrasse 12 CH-8401 Winterthur T: +41 56 618 81 81 F: +41 56 618 81 01	Sulzer Metco AG Rigackerstrasse 16 5610 Wohlen/AG T: +41 56 618 81 81 F: +41 56 618 81 00	2'100	Heat treatment equipment  Surface treatment equipment  QC equipment	750	Thermal Spray Thin Film & Heat Treatment Turbine Components Weld & Hardfacing Friction Lining Specialty processes	Supply raw mat. for metal powders Heat treatment Surface treatment Quality control Hi-tech welding Vacuum heat treatment Component cleaning	<a href="http://www.sulzermetco.com/">http://www.sulzermetco.com/</a> Dr. Richard K. Schmid, <a href="mailto:richard.schmid@sulzer.com">richard.schmid@sulzer.com</a>

## Metallurgy in Switzerland (Iron and Steel)

### Competences available for ITER

Company (Parent company)	Subsidiary	Emplo- yees	Production facilities	Turnover [mio CHF]	Products / Services / Production volumes	further processes	remarks and particularities Contact person
SWI Swiss Welding Institute Rue du Nord 3 1400 Yverdon-les-Bains T: +41 24 557 73 90 F: +41 24 557 73 87			Vast selection of welding equipment for testing and instruction		Engineering and welding certification  Development of specific welding techniques	Development and applied research contracts  Structured training programs	<a href="http://www.swi.ch">http://www.swi.ch</a> Luc Espic <a href="mailto:Luc.Espic@swi.ch">Luc.Espic@swi.ch</a> <a href="mailto:swi-info@swi.ch">swi-info@swi.ch</a>
vonRoll infratec (holding) ag Bahnhofstrasse 23 CH-6300 Zug T: +41 41 720 01 05	vonRoll casting (emmenbrücke) ag Rüeggisingerstrasse 2 6020 Emmenbrücke T: +41 41 269 31 31 F: +41 41 269 31 32	220	<u>Machine-molding foundry</u> <ul style="list-style-type: none"> <li>Flask dimension 1100 × 925 × 280/280 mm</li> <li>4 induction furnaces (2×8t, 1×6t, 1×4t)</li> </ul> Heat treatment Patternmaking: <ul style="list-style-type: none"> <li>5-axes milling machines (2 × FZ30 from Zimmermann)</li> </ul> Engineering department: <ul style="list-style-type: none"> <li>CAD with Catia and Pro/Engineer</li> <li>Development and optimization with casting simulation and finite element analysis</li> </ul>		Annual production: 9'000 t Weight of castings: 2 to 150 kg  Product mix: Retarders for hydrodynamic brakes, double walled, water cooled exhaust tubes, exhaust manifolds, timing cases, flywheel housings, gas intake housings for turbo-chargers, gear boxes, base plates, lateral plates for weaving, knitting, winding and stitching machines, fire hydrants, valves, fittings, pulleys and castings for drive systems for elevators and cable cars	Grades: Cast iron <ul style="list-style-type: none"> <li>With lamellar graphite from EN-GJL-150 to EN-GJS-300</li> <li>With nodular graphite from EN-GJS-350 to EN-GJS-800</li> <li>Si-, Mo-alloyed up to EN-GJS-XSiMo5-1</li> <li>Ni-alloyed (Ni-Resist) up to EN-GJS-XNiSiCr35-5-2</li> <li>Austempered ductile iron (ADI), EN-GJS-800-8 to EN-GJS-1400-1</li> </ul>	<a href="http://www.vonroll-casting.ch">www.vonroll-casting.ch</a> Danilo Fiato <a href="mailto:info@vonroll-casting.ch">info@vonroll-casting.ch</a>
vonRoll infratec (holding) ag Bahnhofstrasse 23 CH-6300 Zug T: +41 41 720 01 05	vonRoll casting (rondez) sa Rondez 17 CH-2800Delémont T: +41 32 421 77 77 F: +41 32 421 77 76	200	<u>Machine-molding foundry</u> <ul style="list-style-type: none"> <li>Flask dimensions 1400 × 1200 × 350/350 mm and 1900 × 1600 × 350/350 mm</li> <li>6 induction furnaces (2×8t, 1×16t, 2×3.6t, 1×1t)</li> </ul> Machining facilities (various NC milling machines)		Annual production: 14'000 t Weight castings: 30 to 600 kg  Product mix: Gas admission chambers for turbochargers, Rotor and stator blades for gas and steam turbines, water-cooled exhaust pipes and water-bearing casings for large diesel engines, cylinder heads for gas engines, brake discs for rail vehicles, hinges for transition	Grades: Cast iron <ul style="list-style-type: none"> <li>With lamellar graphite from EN-GJL-150 to EN-GJS-300</li> <li>With nodular graphite from EN-GJS-350 to EN-GJS-700</li> <li>Si-, Mo-alloyed up to EN-GJS-XSiMo5-1</li> <li>Austempered ductile iron (ADI), EN-GJS-800-8 to EN-GJS-1400-1</li> </ul>	<a href="http://www.vonroll-casting.ch">www.vonroll-casting.ch</a> Danilo Fiato <a href="mailto:info-rondez@vonroll-casting.ch">info-rondez@vonroll-casting.ch</a>

## Metallurgy in Switzerland (Iron and Steel)

### Competences available for ITER

Company (Parent company)	Subsidiary	Emplo- yees	Production facilities	Turnover [mio CHF]	Products / Services / Production volumes	further processes	remarks and particularities Contact person
					systems in buses, gear casings, base plates, side plates etc. for weaving, knitting, winding and stitching machines, extensive product range of municipal castings for civil engineering projects		
vonRoll infratec (holding) ag Bahnhofstrasse 23 CH-6300 Zug T: +41 41 720 01 05	vonRoll hydro (suisse) ag Von Roll-Strasse 24 4702 Oensingen T: +41 62 388 11 11 F: +41 62 388 11 78	115	Supplier of products and services for water and gas supply. <ul style="list-style-type: none"> <li>• 4 foundries for the production of castings and tubes</li> <li>• Machining facilities</li> </ul>		Products: <ul style="list-style-type: none"> <li>• Pipes and fittings</li> <li>• Valves</li> <li>• Hydrants</li> <li>• Municipal castings (manhole covers)</li> <li>• Pipe-collars</li> </ul>	Services: <ul style="list-style-type: none"> <li>• Leak localization</li> <li>• Maintenance (servicing, revision and control of hydrants and valves)</li> <li>• vonRoll hydroport® (Intelligent network management)</li> <li>• Quality Control of drinking water</li> </ul>	<a href="http://www.vonroll-hydro.ch">http://www.vonroll-hydro.ch</a> Iwan Heuberger <a href="mailto:info@vonroll-hydro.ch">info@vonroll-hydro.ch</a>
Weiss Technik AG Brügglistrasse 2 8852 Altendorf/SZ T: +41 55 256 10 66 F: +41 55 256 10 76			Manufacturer of industrial furnaces		Industrial furnaces for electro mechanics and electronics, automotive, pharmaceutical, textile, aeronautical and space industries, for surface, glass and metal treatment, etc.	Environmental simulation	<a href="http://www.weiss-technik.ch">www.weiss-technik.ch</a> Dieter Kocher <a href="mailto:d.kocher@weiss-technik.ch">d.kocher@weiss-technik.ch</a>
Wolfensberger AG Bäretswilerstrasse 45 CH-8494 Bauma T: +41 52 396 11 11 F: +41 52 396 15 50		250	Precision casting Sand casting Machining facilities Material development and metallurgical research	50	Precision Castings 1 to 400 kg, 1m x 1m  Sand Castings 5 to 2'500kg, 2m x 2m  More than 100 steel, iron, nickel and cobalt alloys. Tailor made materials according to customer request.  Specialist for high temp. alloys (heat and creep resistant)	Machining in house: Lathe parts 5 CNC carousel machines 5 CNC oblique turning m. Cubicle parts 4 machining centers 1 x 0,85m 6 CNC 3 x 0,8 x 0,8m  Assembly shop, assembling of purchased parts.  Subcontracting of coatings, surface and special heat treatments, etc.	<a href="http://www.wolfensberger.ch/">http://www.wolfensberger.ch/</a> Thomas Iten, <a href="mailto:thomas.iten@wolfensberger.ch">thomas.iten@wolfensberger.ch</a>