

PROJECT
Commercial

TITLE
Reference installation list

	<u>Name</u>	<u>Function</u>	<u>Date</u>
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AGELLIS Group AB

TABLE OF CONTENTS

1. Converter/BOF EMLI SIO system	3
2. Furnace EMLI FBL system	3
3. Ladle EMLI SIL system.....	3
4. Tundish EMLI T system	3
5. Mould EMLI M/Ms system.....	4
6. Smelter EMLI S system	4
7. Smelter EMLI ELP/ELP-W system.....	4
8. Sampling - Provac ALS/HLS systems	5

DOCUMENT CHANGE RECORD

Rev	Date	Paragraphs affected	Change information	Author
A	2011-07-04	All	New	Toly
B	2011-07-29	3	Added references	Toly
C	2011-12-09	3, 4, 6	Added references	Toly
D	2011-12-12	3, 4	Name changes	Toly
E	2012-05-14	3, 4, 6	Added references	Toly
F	2012-07-15	3, 5, 6	Added references	Toly
G	2013-01-14	2, 3, 4, 5, 7	Added references	Toly
H	2013-07-11	1, 3, 4, 5, 7	Start-up dates changed	Toly

Please note that where no chemical symbol is shown for the metal being produced, it is Steel.

1. Converter/BOF EMLI SIO system

Sold:

Voest Alpine Stahl Donawitz, Leoben, Austria	upgrade 2010	2 units
ArcelorMittal, Eisenhüttenstadt, Germany		2 units
Kobe Steel Ltd., Kakogawa, Japan		3 units
Erdemir, Ereğli, Turkey		3 units
Umicore, Belgium (Cu)	expected start Q4 2013	1 unit

2. Furnace EMLI FBL system

Sold:

Ovako Hofors, Sweden	expected start Q4 2013	1 unit
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Trial:

Nanki Steel Plant, Venice, Italy	completed successful trial	1 unit
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3. Ladle EMLI SIL system

Sold:

Ternium Siderar, CCM1 San Nicolas, Argentina		1 unit
Ternium Siderar, CCM2 San Nicolas, Argentina	expected start-up Q1 2014	1 unit
CSH, Talcahuano, Chile		1 unit
ArcelorMittal, Bremen, Germany		1 unit
ArcelorMittal, Eisenhüttenstadt, Germany		1 unit
Jindal Stainless Ltd., Hisar, India		2 units
Tenaris TAMSA, Vera Cruz, Mexico	upgrade 2011	1 unit
Columbus Stainless, Middleburg, South Africa		1 unit
ArcelorMittal, Vanderbijlpark, South Africa		3 units

Trial:

Höganäs Halmstadverken, Sweden	completed successful trial	1 unit
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4. Tundish EMLI T system

Sold:

AG der DillingerHütte, Dillingen, Germany		3 units
Aurubis Netherlands B.V., Zutphen, Netherlands (Cu)		1 unit
Aurubis Sweden AB, Finspång, Sweden (Cu)		1 unit
Tata Steel Teesside Tech, Middlesbrough, UK		1 unit
ArcelorMittal Burns Harbor CCM1 USA		2 units
ArcelorMittal Indiana Harbor East No.1 Caster USA		1 unit
ArcelorMittal Plate, Coatesville, USA	upgrade 2011	1 unit
Gerdau Ameristeel, Midlothian, USA		1 unit
US Steel Gary Works No. 1 Caster Gary USA		1 unit
Steel of West Virginia, Huntington USA		1 unit
NA Höganäs, Inc. - Stony Creek Plant USA		1 unit
Höganäs AB, Halmstadverken, Halmstad, Sweden		1 unit
Vorskla Steel, Frederiksværk, Denmark (plant closed)		1 unit
ArcelorMittal Ostrava Steel, Czech Republic		1 unit

O.R.I Martin, Brescia, Italy		1 unit
Tenaris Dalmine, Italy		1 unit

ELKEM Thamshavn, Norway (Si)		1 unit
POSCO Pohang Korea		1 unit
Tenaris Siderca, Argentina	start-up Q3 2013	2 units

Trials:

Ruukki Oy, Finland	completed successful trial	1 unit
ArcelorMittal Burns Harbor CCM2 USA	expected start-up Q4 2013	1 unit

5. Mould EMLI M/Ms system**Sold:**

Ternium Siderar, San Nicolas, Argentina		4 units
Usiminas, Cubatao, Brasil		2 units
Krakatau Steel, Cilegon, Indonesia		1 unit
Aurubis Netherlands B.V., Zutphen, Netherlands (Cu)		1 unit
ArcelorMittal, Vanderbijlpark, South Africa	upgrade 2012	4 units
Sandvik Steel AB, Sandviken, Sweden		3 units
Aurubis Sweden AB, Finspång, Sweden (Cu)		1 unit
Aurubis Sweden AB, Västerås, Sweden (Cu)		2 units
Allegheny Ludlum, Breckenridge, USA		1 unit
AK Steel, Middletown, USA	upgrade 2012	2 units
RG Steel Sparrows Point, USA (plant closed)		2 units
ArcelorMittal Indiana Harbor East, USA		6 units
ArcelorMittal Plate, Coatesville, USA	upgrade 2011	1 unit
Aurubis Buffalo Inc., Buffalo, USA (Cu)		3 units
North American Stainless, Ghent, USA		1 unit
Jiangyin Xing Cheng Special Steel, Jiangyin; China		3 units
Olin Brass, East Alton, USA (Cu3Zn2)		2 units
US Steel, Great Lakes, USA		2 units
ABB Research, Sweden		2 units
Dongbei Special Steel Group, Dalian, China		2 units
Henan Jiyuan Iron & Steel, China		3 units
MME, Iran	expected start Q2 2014	1 unit
SPP Yulchon, Korea	expected start Q3 2014	2 units

Trial:

Severstal, Dearborn, USA	completed successful trial	2 units
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6. Smelter EMLI S system**Sold:**

Aurubis Lünen, Germany (Cu)		1 unit
Umicore, Belgium (Cu)		2 units

7. Smelter EMLI ELP/ELP-W system**Sold:**

Lonmin Platinum Marikana, South Africa (Pt)		1 unit
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Anglo Platinum Polokwane South Africa (Pt)		1 unit
Elkem Solar, Norway (Si)	expected start Q4 2014	1 unit
Alcoa Norway (Al)		1 unit
Umicore, Belgium (Cu)	expected start-up Q4 2013	1 unit

Trial:

Kennecott Copper, USA FCF (Cu)	completed successful trial	1 unit
Kennecott Copper, USA FSF (Cu)	completed successful trial	1 unit
Boliden Rönnskårsverken, Sweden (Cu)	completed successful trial	1 unit
SMS Siemag/CVRD MOP, Brasil (FeNi)	completed successful trial	1 unit
Hatch/Vale Inco Copper Cliff, Canada (Cu)	completed successful trial	1 unit
TiZir, Odda, Norway (TiO ₂)	completed successful trial	1 unit
Umicore, Belgium (Cu)	expected start-up Q4 2013	1 unit

8. Sampling - Provac ALS/HLS systems**Sold:**

Bluescope Steel, Port Kembla, Australia	transfer ladle	1 unit
BHP, Newcastle, Australia (now closed)	ladle furnace	1 unit
ArcelorMittal, Charleroi, Belgium	ladle bubbling	3 units
ArcelorMittal, Hamilton, Canada	ladle furnace	1 unit
ArcelorMittal, Hamilton, Canada	transfer ladle	1 unit
ArcelorMittal, Hamilton, Canada	vacuum degasser	1 unit
Tata Steel, Aldwarke, United Kingdom	ladle furnace	1 unit
Egyptian Iron & Steel, Helwan, Egypt	ladle furnace	1 unit
Outokumpu, Tornio, Finland	transfer ladle	2 units
Outokumpu, Tornio, Finland	ladle furnace	1 unit
Outokumpu, Tornio, Finland	bubbling station	2 units
Krupp Hoesch, Dortmund, Germany	ladle furnace	1 unit
ILVA Taranto, Italy	desulphurization	2 units
ILVA, Piombino, Italy	ladle furnace	1 unit
ILVA, Piombino, Italy	ladle degasser	1 unit
ILVA, Terni, Italy	ladle furnace	1 unit
ILVA, Terni, Italy	ladle degasser	1 unit
ArcelorMittal, Schifflange, Luxembourg	ladle furnace	1 unit
Fundia, Mo I Rana, Norway	ladle furnace	1 unit
OEMK, Stary Oskol, Russia	ladle furnace	1 unit
AHV, Bilbao, Spain (now closed)	transfer ladle	1 unit
ArcelorMittal, Avilés, Spain	desulphurization	3 units
ArcelorMittal, Avilés, Spain	iron torpedo	3 units
MS&A, Middelburg, South Africa	ferrochrome plant	1 unit
SSAB, Luleå, Sweden	ladle bubbling	2 units
SSAB, Luleå, Sweden	iron torpedo	2 units
SSAB, Luleå, Sweden	desulphurization	4 units
SSAB, Luleå, Sweden	rh degasser	1 unit
SSAB, Oxelösund, Sweden	ladle furnace	1 unit
Ovako, Hofors, Sweden	ladle furnace	1 unit
Outokumpu, Avesta, Sweden	transfer ladle	2 units
Outokumpu, Avesta, Sweden	ladle furnace	1 unit
Outokumpu, Avesta, Sweden	ladle bubbling	1 unit
Inexa Profil, Luleå, Sweden	ladle furnace	1 unit
Sandvik Steel, Sandviken, Sweden	transfer ladle	1 unit
Sandvik Steel, Sandviken, Sweden	deslagging station	1 unit
Uddeholm Tooling, Hagfors, Sweden	vacuum degasser	1 unit

Wei Chih Steel, Nan Pu Village, Taiwan	ladle furnace	1 unit
ArcelorMittal Steel, Indiana Harbor, USA	ladle furnace	2 units
ArcelorMittal Steel, Sparrows Point USA	ladle bubbling	2 units
Ellwood City Forge (ECF), Ellwood, USA	ladle furnace	1 unit
US Steel, Gary, USA	ladle furnace	2 units
US Steel, Granite City, USA	transfer ladle	1 unit
US Steel, Fairfield, USA	ladle furnace	2 units