

Experience Report - CHALCO Shanxi-Huaze Anode Plant, China

Successful Start-Up of first BUSS Horizontal Paste Line incl. a Pitch Melting Plant

In summer 2003 Davy Process Technology (Switzerland) AG, today Buss ChemTech AG (BCT) could conclude two contracts with China Aluminium Intl. Trading Co., Ltd. for technology and equipment delivery for building the Anode Paste Plant as part of the new project "280'000 TPY Aluminium Smelter & Power Station" of Chalco Shanxi-Huaze Aluminium & Power Co., Ltd. This project is the only one project for building a new smelter by Chalco in recent years. The project is designed by SAMI (Shenyang Aluminium & Magnesium Institute)

It was the first time the Buss HPL (Horizontal Paste Line) could be sold under strong fierce competition and succeeding against other systems.



One contract for BCT was covering the supply of the Coke Preheating Screw and the Buss Kneader including the control system and all auxiliaries. The third major equipment of the HPL, the Horizontal Paste Cooler was delivered by Loedige GmbH directly. The plant design is good for a production of 40 TPH of best anode paste quality which is formed to green anodes by a Vibro Compactor supplied by Outokumpu.

The plant also incorporates a Buss Pitch Melting Plant (PMP) for a melting capacity of 8 TPH. Concept & design, basic engineering and supply of core equipment including the plant control system were part of a second contract for BCT.



It was in autumn 2004 when the equipment was shipped to the plant site in Shanxi province where it arrived finally just before the strong winter time.

The installation works started in early spring 2005 on both, the Anode Plant and the Pitch Melting Plant ending with commissioning and start-up phase which could be concluded in less than 2 months. After less than 9 months from starting the installation, the first green anode was produced in December 2005. At that time the performance test of the PMP could be finished resulting in production efficiency above 100%.



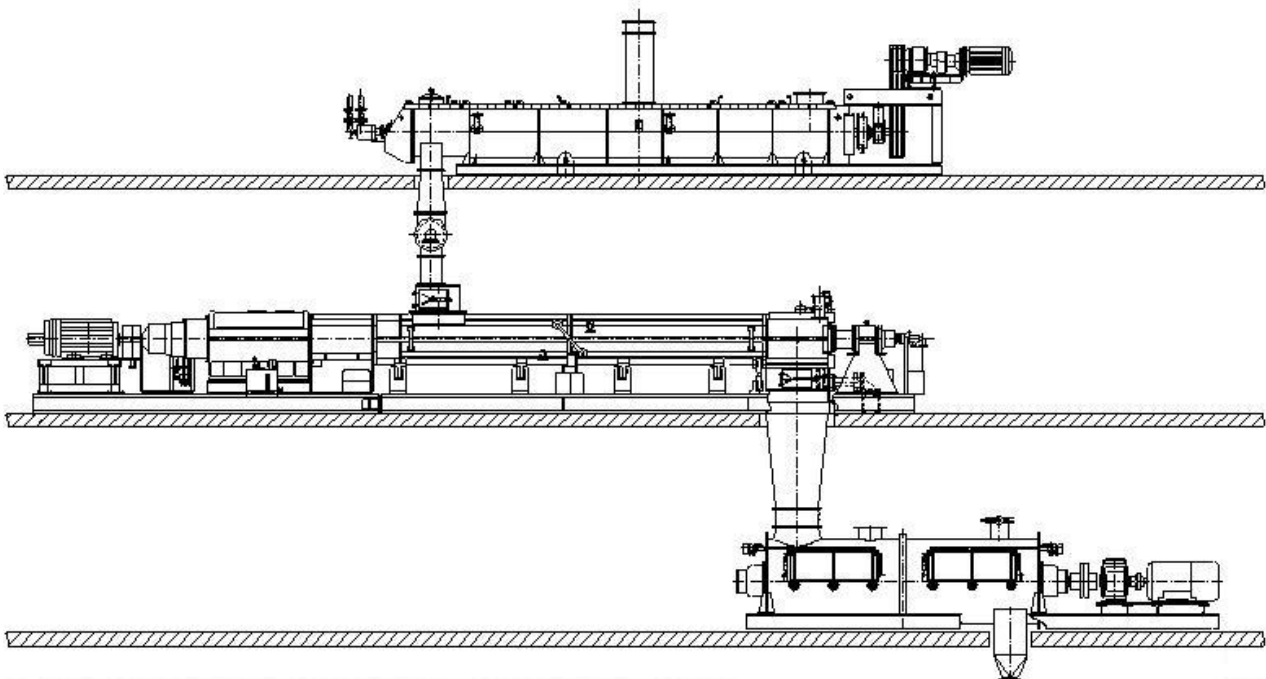
The anode plant is running in continuous mode since the successful start-up and 6000 ea qualified anodes produced the first month since the start up demonstrates the 100% appropriate system. Thus the smelter still run on short demand of anodes, full production of the anode plant was still not required after 8 months of regular operation. Consequently the overall performance test is still pending which also shall include a fine tuning/optimisation of the process. A significant improving of the anode properties and plant operation performance is expected, whereas current figures already reached international quality standard.

The successful implementation of the Buss HPL together with the Buss PMP is again showing the leading position for innovative technology, design and processing of Buss ChemTech Technology for the production of the highest anodes quality available for the aluminium industry.



Anode properties and operation data of first production phase:

Average green density	1.62	Kg/dm ³
Average backed density	1.58	Kg/dm ³
8 months production rate	~85'000	Tonnes
Production rate operated	25 – 37	Tph
Paste t at Kneader outlet	< 179	°C
Paste t at Cooler outlet	143 ± 2	°C
Plant availability	>75	%



For further information please contact:

Buss ChemTech AG
info@buss-ct.com
www.buss-ct.com

Altaic Technologies Ltd., Beijing
Altaic@263.net

Shanxi-Huaze Aluminium & Power Co. Ltd.
leigh418@vip.sina.com

BUSS ChemTech

BUSS ChemTech AG
 Hohenrainstrasse 10,
 CH-4133 Pratteln 1, Switzerland
 Tel. +41 (0) 61 825 6462, Fax +41 (0) 61 825 6737