December 2010

PipeLine

HOBAS®

Contents

Electricity and Heat from Waste

HOBAS® Industrial Pipes for a Lean Gas Pipeline in a Waste Incineration Plant, AT

In 2009 ground was broken for the new incineration plant of Linz AG to ensure an orderly disposal of waste and sufficient energy supply for Greater Linz.

The plant consists basically of two facilities: a prefixed waste processing unit with integrated fuel storage and the actual power plant where waste is burned and transformed into heat by fluidized bed combustion. Hot steam and high pressure that are subsequently generated in a calorifier are converted into electricity with a steam turbine and the heat remaining in the processed steam is then used for warm water to feed the district heating system. With this new power plant the Linz AG can supply electricity for an extra 37,000 households and district heating for another 11,000 dwellings.

The processed material consists of municipal-, commercial-, and industrial waste as well as sewage sludge and other non-hazardous waste materials. Thanks to the well-thought-out location of the facility, material deliveries can be conducted by truck, train or ship. Prior to combustion, the waste is pretreated in the material processing plant. Recyclable and extraneous matters are discharged before the waste is shredded and mixed to achieve a homogeneous mass with a constant calorific value. The prepared material is then stored in the fuel tank until it is transported to the power plant. To minimize odorous emissions from fuel storage, the air is vacuumed and led directly to the combustion chamber through a lean gas pipeline. This 650 meter long DN 1200 pipeline conveying the gas at a pressure of 1.5 bars is installed on a steel structure. HOBAS won the pipe job proposing a tailor made concept which included diagonal angular cuts on the pipe and screwed couplings. Since the lean gas pipeline is fixed above ground and outdoors it is exposed to temperature variations due to weather and seasonal conditions. Moreover, condensates contaminated with aggressive substances such as organic acids, oil and solvents from inside the pipe pose a great challenge to the pipe material. Due to the low thermal expansion coefficient of HOBAS Centrifugally Cast Pipe Systems there are however hardly changes of length and the

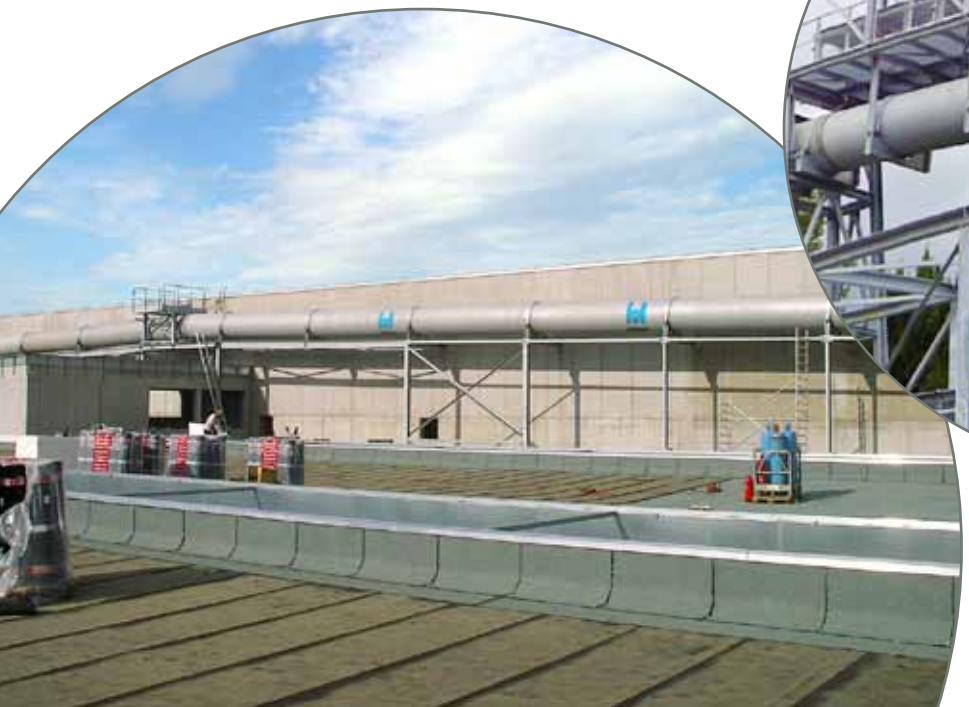
small variations that occur are fully absorbed by the flexible HOBAS FWC Couplings. On client request, the pipes were produced with a 2 mm thick resin liner and certifications served to prove the chemical resistance of HOBAS Couplings so that even demanding technical requirements were easily met. An additional advantage of the pipe material is its comparably light weight that positively affected the design of the steel structure and facilitated pipe installation considerably. Also the client´s color preference could be taken into account: The pipes produced with a grey dye perfectly blend in with the steel structure.

As the gas pipeline was assembled simultaneously while erecting the steel structure it was obligatory to respect the tight delivery schedule. With a carefully planned production and well organized logistics HOBAS ensured a flawless installation. Top quality products, a made-to-measure solution for the client and a well organized team let HOBAS once again demonstrate its proficiency for industrial applications.

Fmd: hobas.austria@hobas.com

Year of Construction
2010
Total length of pipe
650 m
Diameter
DN 1200
Pressure Class
PN 1.5
Installation
Above ground, on suspensions
Application
Lean gas pipeline

Client
Linz AG
Advantages
Custom made concept, small thermal expansion coefficient, chemically resistant liner on client's request, low weight, coloring on request



HOBAS Engineering GmbH
Pischeldorfer Str. 128 | 9020 Klagenfurt | Austria
T +43.463.48 24 24 | F +43.463.48 21 21
info@hobas.com | www.hobas.com