



Technology Description (TD) for Anaerobic Digestion Technologies

Contact Information:

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<i>Date (of filling the TD):</i>	16.01.2017			

Technology Description:

NAME OF TECHNOLOGY	ELECTRA
ASSIGNMENT OF TECHNOLOGY	16.01.2017
TECHNICAL READINESS LEVEL	
<p>TRL 1 - basic principles observed</p> <p>TRL 2 - technology concept formulated</p> <p>TRL 3 - experimental proof of concept</p> <p>TRL 4 - technology validated in lab</p> <p>TRL 5 - technology validated in relevant environment (industrially relevant environment in case of key enabling technologies)</p> <p>TRL 6 - technology demonstrated in relevant environment (industrially relevant environment in case of key enabling technologies)</p> <p>TRL 7 - system prototype demonstration in an operational environment</p> <p>TRL 8 - system completed and qualified</p> <p>TRL 9 - actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)</p>	<p>1 2 3 4 5 6 7 8 9</p>
TECHNOLOGY/EQUIPMENT AVAILABILITY	
PATENT RIGHTS	YES



METHOD OF MAKING THE TECHNOLOGY AVAILABLE	<i>Licence selling</i>	YES
	<i>Licence granting</i>	YES
POSSIBLE END USERS OF TECHNOLOGY	<i>Please name end users/ contacts that should be invited to project workshops</i>	Termo-Klima MK Sp. Z o.o S.K. Tartaczna str.12, 40-749 Katowice, Poland Bioelektrownie Świętokrzyskie MK Sp. Z o.o. Targowa str 18, 25-520 Kielce, Poland

Description of the technology/equipment:

The technology is able to deal with a variety of raw materials and organic waste. It is airtight and, therefore, odour-free, as well as waste-free. The final products are either electric energy; or electric energy and pure methane, and a granulated organic fertiliser substitute. The water used for the process is contained in a closed circulation system. Surplus water is treated at a micro-water treatment plant using reverse osmosis (water after treatment reaches I/II on the purity scale) and then removed from the system.

Our technology is also able to utilise materials with high nitrogen content (as basic ingredient), specifically poultry carcass, and sugar beet silage without additives.

The solutions that are part of the ELECTRA® technology, in terms of the formula, the mechanics of substrate preparation and the application of an innovative mixing unit with slitted impeller blades in the fermentation chamber made it possible to achieve a fermentation period that is much shorter. What is more the gasification of the substrates undergoing fermentation is faster, thus allowing extraction of greater amounts of biogas from comparable types of organic material in shorter time.

Fermentation in the ELECTRA® technology is a single-phase process.

The ELECTRA® technology has been submitted to the Polish Patent Office as application No. W-121256.