

Dr. Anrin Bhattacharyya Founder and CEO

THE ULTIMATE ROAD TO ZERO-WASTE IRONMAKING™

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Message from the Founder and CEO

Dear Colleagues,

The metals industry is going through a unique challenging phase in the 21st century. The present trends could be summarized as multifaceted demands in the fields of raw materials efficiency, recycling, process optimization, alternative resources, environmental aspects and high level of employee competence. All of these come at a cost of breakneck competitions to increase EBITDA in a highly competitive industry. Quality plays a more important role than quantity in order to achieve global superiority.

We, at the RECYRON Engineering & Consulting e.U., are committed to cater to the continuously growing and challenging demands of the metals industry. RECYRON®, our groundbreaking and patent-pending technology to recycle all possible raw materials wastes from mines and integrated steel plants is the ultimate road to a Zero-Waste Ironmaking[™] Process. We offer the license of the RECYRON® process on an attractive combination of fixed and royalty basis. We are also looking for investors who look for high returns in 3-4 years for the construction and commissioning of the first stand-alone RECYRON® plant.

We also offer innovative and cost-effective technologies in the areas of coke making, coal briquetting, processing of titanium and vanadium containing magnetite ores etc. Additionally, our pool of more than 400 experts from the steel and well as non-ferrous industry are committed to provide solutions and consultancy at the highest level of competence. Our sourcing network for raw materials, scrap and other consumables for the metals industry offer a guaranteed lower price without compromising with the quality. Steel and non-ferrous metals companies can also take the advantage of our customized academic training courses for a superior knowledge management.

We strive for the goal of attaining superiority in our business domain by delivering the highest possible quality of service to our clients. We will be looking forward to receive enquiries from you related to our services.

With best regards to all professionals in the metals industry.



SOLUTIONS WITH INGENUITY!



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"Be superior! Convert waste to cash"



RECYRON®: The Process

What is RECYRON®?

RECYRON[®] is the ultimate smart choice for a Zero-Waste Ironmaking[™] process. This process is designed to recycle all possible raw material wastes (RMWs) from an integrated or DRI based steel plant combined with a high profit margin. RECYRON takes care of all RMWs of steel plants and iron-ore mines.

How does RECYRON[®] work?

RECYRON uses a simple technology like briquetting to its utmost potential to agglomerate all the wastes, and thereafter reduces it using a rotary kiln (coal based) to produce high quality direct reduced iron (DRI). The process is also able to generate power as the by-product.

Which wastes can RECYRON® handle?

Superfine ore, coke breeze, sinter dust, blast furnace dust and sludge, converter sludge, mill scale, DRI sludge and any other raw material wastes containing significant amount of iron or carbon.

Where could RECYRON® be installed?

Possibility 1 – As a captive plant for an integrated steel-mill to recycle its own wastes.

Possibility 2 – As a stand-alone plant at any geographic area with a high concentration of mining and steelmaking activities with proper logistics.

Where to use the RECYRON® DRI briquettes?

Possibility 1 – Charging in the blast furnace as a part of the burden. Approximately 400 kg of coke could be saved per ton of DRI charged. Possibility 2 – Normal DRI charge for electric steelmaking.

What is the quality of RECYRON[®] DRI briquettes?

Metallic Fe between 73.5% to 80% and Carbon between 2.5% to 4% depending on the raw material quality and availability.

How does RECYRON[®] care for the environment?

RECYRON[®] stops the valuable raw materials going to landfill and creates value out of waste. In parallel, it also reduces coke consumption and in turn reduces CO2 emission significantly.

What is the payback period for a 500 tons per day RECYRON®?

The payback period for a 500 tons per day RECYRON[®] plant is 4 years with a phenomenal IRR (internal Rate of Return) of 20 - 22 %.

Engineering and Consulting

New Technology development

- 1. Coal blending, coke making and coke property evaluation
- Process optimization: Coal and gas based ironmaking processes (Rotary Kiln, COREX/ FINEX, MIDREX)
- 3. Coal briquetting (Advanced and patentpending technologies)
- 4. Raw materials optimization for EBITDA increase (Sintering, Pelletizing and Self-Reducing Briquettes)
- 5. Extraction of Ti and V from magnetite ores.

Consultancy

Our company has a pool of more than 400 freelancing global experts from all domains of Iron and Steel Industries as well as Non-Ferrous industries who are available to offer Consultancy, Quick Turnaround Solutions (QTS), Site Inspection and Computer Simulations as per customers' requirements. We understand the value of your time and the importance of fast action. We need a maximum of 72 hours to assign an expert for your demands.

Trading Solutions

We have a global pool of more than 200 suppliers of Raw Materials (Ore, Coal/Coke, Ferro-Alloys), Scrap, Refractory and Spare Parts capable to supply at the most competitive price to ferrous and non-ferrous industries all over the world. We guarantee a lower cost than any other supplier, thanks to our massive network and innovative sourcing techniques.

Academic Training

We provide customized academic training of small groups of industry personnel from metal industries as per individual requirements of client companies. Our instructors are globally accomplished experts in their own fields (both from industries and academic institutions). The training courses are complemented by plant visits.

