Company News

Bruks Siwertell Biomass Expertise contracted for pioneering new Biocarbon Production Plant

Edited by on 7. Dec. 2023
Bjuv, Sweden –

Bruks Siwertell has secured a contract for the design and supply of a new biocarbon pellet plant, which will replace coal in steelmaking and deliver renewable energy to one of the first ‘green steel’ production facilities of its kind. The plant, based in Columbus, Mississippi, USA, has been ordered by one of the largest steel producers in the world, Steel Dynamics Incorporated (SDI), as part of a US joint venture company between SDI and Aymium, SDI Biocarbon Solutions.

Bruks Siwertell’s equipment deliveries include a drum chipper, screening and size reduction equipment, a radial stacker, as well as the complete conveyor system. (Picture: Bruks Siwertell Group)

“We are incredibly proud to be part of this sustainable development,” says Christopher Duffy, Area Sales Manager, Bruks Siwertell. “For this contract, we are

drawing upon the full strength and expertise of our recently expanded wood-processing, handling and storage capabilities, with both Bruks and West Salem Machinery (WSM) equipment specified in the mix.

“The steel industry is in the top five percent of carbon dioxide emitters in the world, making it roughly responsible for about eight percent of total global carbon dioxide emissions; it is looking for sustainable solutions,” continues Duffy. “All eyes will be on this pioneering new biocarbon steel production operation, and our equipment will play an integral role.”

The new pellet plant will produce biochar, a carbon-rich biomass-based charcoal. It will supply SDI’s electric arc furnace steel mills with a renewable alternative to fossil fuel-based carbon sources using Aymium’s patented technology, and use any excess as renewable energy. SDI estimates that the plant will reduce its scope 1 steelmaking greenhouse gas (GHG) emissions between 20 and 25 percent.

Bruks Siwertell’s equipment deliveries include: a large high-capacity Bruks Klöckner horizontal drum chipper model DH 1050 x 1450; WSM screening and 4888SP vertical green hammermill systems; and a Bruks radial stacker, as well as the complete conveyor system from receiving to the dryer delivery.

“We are well-established in the wood pellet industry for designing and supplying complete systems, with the reputation of delivering on time and meeting all performance requirements,” Duffy notes.

“The high-capacity micro-chipping capabilities of our drum chippers, which can process whole Southern Yellow Pine trees, as well as waste wood residues, along with our industry-setting storage and reclaimer capacities, were significant in winning the contract,” he explains. “Add to this, WSM green hammermill systems, which produce the ideal product quality necessary for the most efficient drying requirements and optimal fiber preparation for pellet production, and you can see why Bruks Siwertell became the one-stop-shop for SDI.”

The plant is planned for a two-phase development process. Phase one will result in an annual biochar pellet production of 160,000 metric tons per year, increasing to reach its target of 480,000 metric tons per year in phase two. Phase one is due for delivery mid-2024 for startup and commissioning towards the end of the year. Phase two will be scheduled at a later date. The vast majority of equipment has been sourced for supply from North America and is scheduled for delivery in installments as and when is practical to receive it on site.