

NPC Intercement, Boiler Fly Ash Silo Project, Port Shepstone, Simuma, South Africa, 2016

DemcoTECH Engineering supplied a turnkey fly ash silo incorporating the ash feed and discharge system for NPC in KwaZulu-Natal, South Africa. The new 1 000t silo, with a variable extraction rate of between 5 and 20tph, is a fully enclosed welded steel structure with a circular diameter of 10m and a height of 24m.

The silo is fed fly ash from the road tankers using a standard pneumatic feed system. The silo reclaim conveyor is automatically operated and consists of aeration pads, a rotary valve and screw conveyors and then feeds onto the existing conveyor system. The automatic pre-selected feed system consists of a surge bin with a variable speed rotary proportioning valve. A dust extraction filter system is also included for health and environmental consideration.

The silo steel fabrication was executed at the workshop to allow for easier and more accurate site erection as this included the bevelling of weld edges, blasting and prime painting of plates as well as safe transportation to site using jigs. The silo was site welded to international standards.

DemcoTECH's silo feed and discharge system design ensured that dust would be eliminated during road tanker offloading and ash reclamation by designing a fully enclosed and automated system which included the screw conveyors and the dust air filtration systems.

The site of the Simuma silo is located alongside the limestone source in the mountainous, environmentally sensitive Oribi Gorge area.

The coarse ash was previously delivered to NPC in trucks from Durban and loaded manually using front end loaders to feed the plant.

NPC Intercement is a manufacturer and distributor of cement, concrete and aggregate products to the hardware retail, ready-mix, concrete product and construction industries.

DemcoTECH is an engineering, project management company offering services from concept design through to project completion to the power generation, cement, mining, metallurgical, manufacturing and port handling industries. Services include conceptual design, feasibility studies, design, engineering, procurement, expediting, construction and commissioning. We perform breakdown work as well as offering operational readiness and training. Plant supplied by DemcoTECH includes troughed conveyors, AeroConveyors™, air-supported conveyors, pipe conveyors, rail-mounted slewing boom stackers, pivot boom conveyors and mobile conveyors.



Client	NPC Intercement
Commodity	Fly Ash
Contract Type	Design, supply, erect and commission
Duration	2016-2017
Location	Port Shepstone, Simuma

DemcoTECH Engineering

Modderhouse, Moddercrest Office Park, High Street, Modderfontein
PO Box 9624, Edenglen, Gauteng 1613 South Africa

+27 (0) 11 608 4355 info@DemcoTECH.com www.DemcoTECH.com