



Suzano Cerrado



ABOUT THIS PROJECT:		
Market Segment: Industrial Structures	Engineer: Pöyry, currently AFRY	Products Used: Xypex Concentrate Xypex Admix C-500 NF
Location: Ribas do Rio Pardo, Mato Grosso do Sul, Brazil	General Contractor: Fortes Engenharia, Afonso França, Construcap, Lopes Engenharia, Cesbe, and others	Owner/ Developer: Suzano S.A.

The Suzano Cerrado Project, located in Ribas do Rio Pardo, represents the world’s largest single line pulp production facility. With an investment of BRL 22.2 billion and a site covering approximately 4.5 million square meters, the project required long term waterproofing and chemical protection of critical concrete structures used throughout the pulp production process.

Given the scale of the investment and the aggressive industrial environment, the primary challenge was ensuring durability and longevity of reinforced concrete structures exposed to moisture, chemicals, and industrial process conditions. Structural protection had to align directly with the long term operational performance and sustainability goals of the facility.

To address these requirements, crystalline technology was specified as part of the durability strategy. Xypex Admix C-500 NF was added directly to the concrete at a dosage of 1 percent relative to cement consumption, while Xypex Concentrate was applied as a surface coating at 1 kilogram per square meter in designated areas.



A total of 65,000 kilograms of Xypex Admix C-500 NF and 5,500 kilograms of Xypex Concentrate were used across key structures including stormwater collection galleries, effluent treatment plants, water treatment facilities, treated water tanks, river water intake structures, evaporation units, boilers, and cooling towers.

By integrating Xypex into the concrete matrix, permeability was reduced and resistance to sulfate expansion, chloride penetration, and aggressive chemical exposure was enhanced.

The crystalline reaction forms and continuously reproduces crystals that fill pores and static microcracks smaller than 0.5 millimeters, becoming a permanent part of the concrete and reactivating in the presence of water.



The result is improved structural durability, reduced maintenance requirements, and extended service life for one of the largest industrial construction projects in Brazil.

