## **Salt Partners**

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## Renoeste produces Europe's purest salt



Renoeste salt upgrading plant with Hydrex-3 hydroextractor co-invented by Vladimir M. Sedivy, CH Patent No. 690840

Under the guidance of Salt Partners, the 40 t/h salt upgrading plant of Renoeste S.A. was successfully started up at Carriço in Portugal.

Salt Partners trained the client's personnel, developed evaluation software, tested the process performance and optimised the plant operation. The tests proved that all performance criteria, such as production capacity and consumption figures, fulfil expectations. Purification efficiency as high as 97.4% and NaCl losses as low as 3.9% were achieved. The salt crystals

are brilliant white, hard, transparent and much larger than vacuum salt. Anti-caking salt additives need not be used. The upgraded salt purity exceeds all expectations. The content of calcium and magnesium in the salt is well below 1 ppm. Sulphates are below 50 ppm. This is believed to be the purest industrial salt commercially produced in Europe, much purer than any vacuum salt.

The salt is supplied to Quimigal S.A. in Estarreja. Quimigal operates a caustic/chlorine plant with membrane cells. There, the use of pure salt reduces the cost of brine treatment and eliminates pollution. The absence of anti-caking additives in salt reduces the danger of damage to ion exchange membranes.

At the Carriço complex, brine is obtained by cavity mining. The cavities are used for natural gas storage. The brine is purified in a continuous process. Salt is crystallized in open ponds at elevated temperatures, utilising heat from a cogeneration plant operated with natural gas. The salt is processed in a 40 t/h refinery employing a process with hydroextraction of impurities. The process was invented by Vladimir M. Sedivy, the founder of Salt Partners.

Salt Partners is an independent firm of consultants and engineering contractors, active in the field of salt production, processing and hypersaline biotechnology. Salt Partners' world-wide reputation is based on more than 30 years of experience gained in projects implemented in Portugal, Spain, Pakistan, India, in the Middle East and in Africa.

The advanced technology of Salt Partners finds application in caustic/chlorine and soda ash plants, in salt and potash mining operations, in solar saltworks, in vacuum salt plants and in production of refined salt for human consumption.

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