DRYING CEREAL SEEDS AND TECHNICAL PLANTS USING UNCONVENTIONAL HEAT

Corina Dana Cernăianu*, Marin Bică

University of Craiova, Faculty of Mechanical Engineering, Thermodynamics & Heat and Mass Transfer Department, 107 Calea București Street, Craiova, Romania

Abstract

The paper presents a series of experimental research conducted to verify theoretical considerations in the drying process of cereal seeds. The authors proposed and built a drying installation in aerated bed fluid, with double energy source - solar and electric. The drying process was developed under automatic control of process parameters.

After theoretical and experimental research, a series of conclusions are drawn, showing that solar energy is an economical alternative to the classical energy source.

It is proved that drying cereals with this method satisfies the desired requirements and standards.

Key words: cereal, drying, solar energy

Received: September, 2010; Revised: October, 2010; Accepted: October, 2010

* Author to whom all correspondence should be addressed: e-mail: cernaianu_corina@yahoo.com; Phone: 0745.933652; Fax: +40.251.416630