



Apparatus and process for rapid finishing of photographic emulsions

Research Disclosure Database Number 8614

Published in June 1971

The Research Disclosure Journal is normally published and distributed on the 10th of every month unless that date coincides with a weekend or public holiday, when it is published directly afterwards. In these cases it is always published by the 12th of every month. Every disclosure is also placed on the RD Electronic database as soon as it is received and it may be published on the database prior to being published in the next edition of Journal.

Research Disclosure is the unique international defensive publication service that allows the world's intellectual property community to establish prior art, and provides an alternative to obtaining a patent at a fraction of the cost and the time taken. It is the world's longest running, independent, industry standard prior art disclosure service.

Kenneth Mason Publications Ltd give consent for this disclosure to be printed out providing it is for personal use, or for the personal or internal use of patent examiners or specific clients only. Photocopies may be made providing it is for personal use, or for the personal or internal use of patent examiners or specific clients and not for resale and the copier pays the usual photocopying fee/s to the relevant Copyright Clearance Centre. This consent does not extend to abstracting for general distribution for advertising, or promotional purposes, for creating new collective works or for resale. This consent also does not extend to other kinds of scanning, printing or copying, such as printing, scanning or copying for general distribution for advertising, or promotional purposes, for creating new collective works or for resale. Document delivery services are expressly forbidden from scanning, printing or copying any Research Disclosure content for re-sale unless specifically licensed to do so by the publishers.

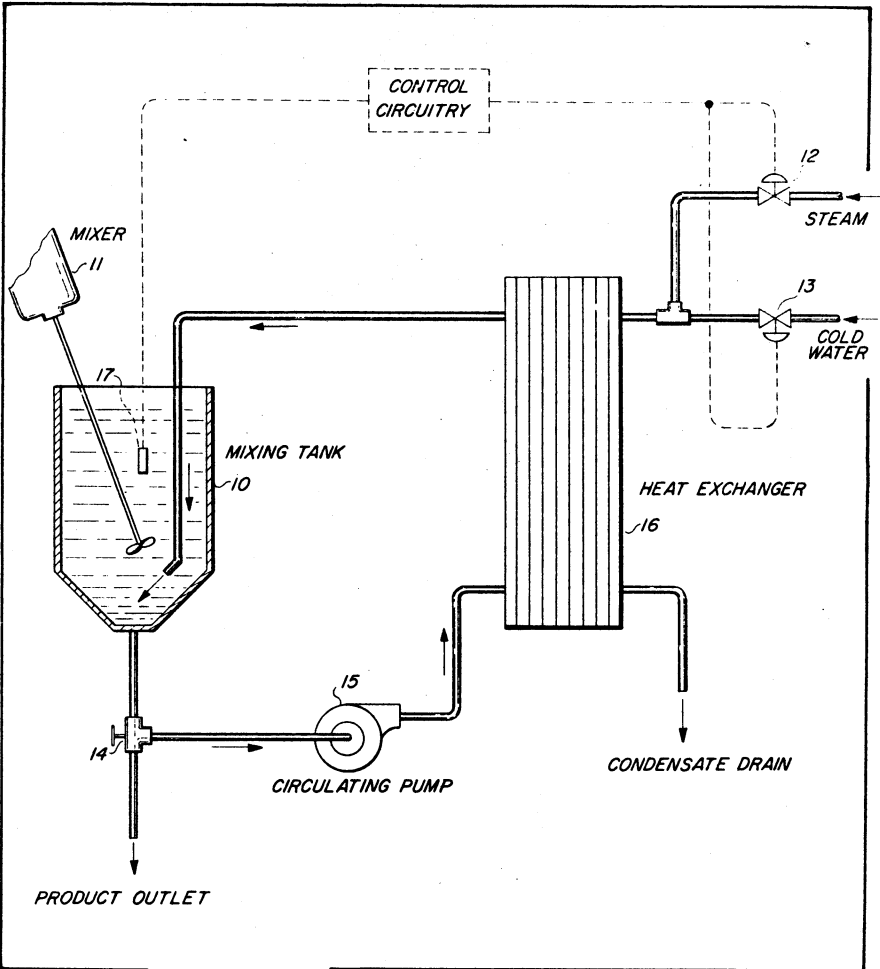
Research Disclosure Journal, ISSN 0374-4353. © Kenneth Mason Publications Ltd
The Book Barn, Westbourne, Hants. PO10 8RS. UK
Tel: +44 (0)1243-377977 Fax: +44 (0)1243-379136
e-mail : info@ResearchDisclosure.com

Apparatus and process for rapid finishing of photographic emulsions

8614

The drawing discloses the component parts of an apparatus and system for the rapid finishing of photographic emulsions. The elements comprising a photographic emulsion, such as gelatin solution, emulsion coagulum, water and chemical sensitizers, are combined and mixed in a tank 10 by a suitable mixer 11. After thorough mixing and proper adjustment of the valves 12, 13 and 14, the mixture is circulated by a variable-speed centrifugal pump 15 through a plate-type heat exchanger 16. After passing through the heat exchanger, the mixture is returned to the tank 10. A sensor 17, which is positioned in the emulsion in the tank 10, monitors the temperature of the emulsion and by means of suitable control circuitry the valves 12 and 13 are adjusted to control the flow of steam or cold water, respectively.

By continuously circulating the mixture



through the heat exchanger 16, more intimate contact between the mixture and the heating (cooling) plates is attained. Because of this intimate and rapid contact of the mixture over a large surface area of the heat exchanger 16, the resultant high heat (cold) transfer rate shortens the time required to raise the temperature of the mixture to the desired finishing temperature. A considerable saving of emulsion finishing time is, therefore, possible, particularly when compared with that required for a finishing cycle as previously accomplished. It has also been found that with such a reduction in emulsion finishing time, there is no adverse effect with respect to the sensitometric characteristics of the emulsion.

Disclosed by: *Donald M Forster and
Gerald J Culhane, Eastman Kodak
Company, Rochester, New York, USA*
8614