

Title (en)

ELECTRIC CIRCUIT FOR PARALLEL EJECTION ELEMENT FAILURE DETECTION

Title (de)

ELEKTRISCHE SCHALTUNG ZUR DETEKTION DES AUSFALLS EINES PARALLELEN AUSWURFELEMENTS

Title (fr)

CIRCUIT ÉLECTRIQUE DE DÉTECTION DE DÉFAILLANCE D'ÉLÉMENT D'ÉJECTION PARALLÈLE

Publication

**EP 4303008 A1 20240110 (EN)**

Application

**EP 22183845 A 20220708**

Priority

EP 22183845 A 20220708

Abstract (en)

An electric circuit for monitoring a condition of an ink ejection unit in an array of ink ejection units (111, 112, 113, 114) is described. Each ejection unit comprises an ink channel connected to a piezo-electric element. The monitoring is done by a measurement of a residual pressure wave in the ink channel. The circuit comprises a controllable switch (4) for making contact with the piezo-electric element, a comparator (8) for comparing an electric signal from the piezo-electric element with a reference signal, a digital memory (6) for saving a digital reference signal and a digital-analog converter. In this circuit each piezo-electric element or group of elements is associated with a specific part of the digital memory, comprising a corresponding reference signal. This enables a parallel monitoring of several ejection units during printing.

IPC 8 full level

**B41J 2/045** (2006.01)

CPC (source: EP)

**B41J 2/0451** (2013.01)

Citation (search report)

- [X] US 2011285773 A1 20111124 - SHINKAWA OSAMU [JP]
- [A] US 2015367633 A1 20151224 - MURATE HIROHITO [JP]
- [A] US 2012293577 A1 20121122 - KYOSO TADASHI [JP], et al

Designated contracting state (EPC)

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Designated extension state (EPC)

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Designated validation state (EPC)

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