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Loris Pietrelli, Sergio Ferro, Marco Vocciante

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# Raw Materials Recovery from Spent Hydrochloric Acid-based Galvanizing Wastewater

Loris Pietrelli<sup>a,\*</sup>, Sergio Ferro<sup>b,†</sup>, Marco Vocciante<sup>c</sup>

<sup>a</sup>ENEA, CR Casaccia, Via Anguillarese 301, 00060 Roma, Italy.

<sup>b</sup>Dipartimento di Scienze Chimiche e Farmaceutiche, Università degli Studi di Ferrara, Via Fossato di Mortara 17, 44121 Ferrara, Italy.

<sup>c</sup>DCCI, Dipartimento di Chimica e Chimica Industriale, Università degli Studi di Genova, Via Dodecaneso 31, 16146 Genova, Italy.

\*Corresponding author. Tel.: +39 0630484362. Fax: +39 0630483818.

†Present address: Ecas4 Australia Pty Ltd, Unit 8 / 1 London Road, Mile End South, SA 5031, Australia

E-mail addresses: [loris.pietrelli@enea.it](mailto:loris.pietrelli@enea.it) (Loris Pietrelli), [fre@unife.it](mailto:fre@unife.it) (Sergio Ferro), [marco.vocciante@gmail.com](mailto:marco.vocciante@gmail.com) (Marco Vocciante).

## Abstract

The composition of spent hydrochloric acid-based pickling liquors, deriving from the galvanizing industry, greatly depends on how long the bath has been used for pickling. We considered solutions containing 40–50 g L<sup>-1</sup> of iron and zinc (as FeCl<sub>2</sub> and ZnCl<sub>2</sub>) and 130–220 g L<sup>-1</sup> of chloride, and used tri-butyl phosphate (TBP) and di-(2-ethylhexyl) phosphoric acid (D2EHPA) in kerosene as extraction solutions. From the spent liquors, zinc was selectively extracted and then recovered from the organic phase by using water or dilute hydrochloric acid. By using the kinetic

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