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[home](#) [page](#) [about us](#) [contact](#)



us

Table of Contents

IN PRESS

RAE 2013

RAE 2012

RAE 2011

RAE 2010

RAE 2009

RAE 2008

RAE 2007

RAE 2006

RAE 2005

RAE 2004

RAE 2003

RAE Home

Editorial

Board

For Authors

- **Authors Declaration**
- **Instruction to Authors**
- **Guide for Authors**
- **Copyright Statement**
- **Submission**

For Reviewers

- **Guide for Reviewers**
- **Reviewers Login**

Subscription

Res. Agr. Eng.

Oko C.O.C.,

Diemuodeke E.O.,

Akilande I.S.:

using spreadsheet

Res. Agr. Eng., 56 (2010): 53-58

This paper presents a spreadsheet add-in for the design of mass flow conical and wedge hoppers. The Jenike's hopper design charts for mass flow were curve fitted. The relationships obtained were used together with other relevant expressions to develop an add-in tool for the determination of the pertinent hopper design parameters (exit size, mass flow rate, semi-included angle, flow factor, and critical applied stress) in the Microsoft Excel environment. The add-in was tested with experimental data, and results obtained were in agreement with those obtained in the literature.

Keywords:

hopper design; curve fitting; Jenike's hopper design charts; MS Excel add-in

[[fulltext](#)]

