(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
7 October 2004 (07.10.2004)

PCT

(10) International Publication Number
WO 2004/085051 A1

(51) International Patent Classification[7]: B01J 8/00

(21) International Application Number:
PCT/US2004/008445

(22) International Filing Date: 19 March 2004 (19.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/401,663 28 March 2003 (28.03.2003) US

(71) Applicant *(for all designated States except US)*: **TUBE-MASTER,INC** [US/US]; 8008Vinecrest Avenue, Suite 1, Louisville, KY 40222 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **JOHNS, Clifford,L** [US/US]; 2614 Evergreen Wynde, Louisville, KY 40223 (US). **SYMPSON, Daniel,D** [US/US]; 2002 Starmont Road, Louisville, KY 40207 (US).

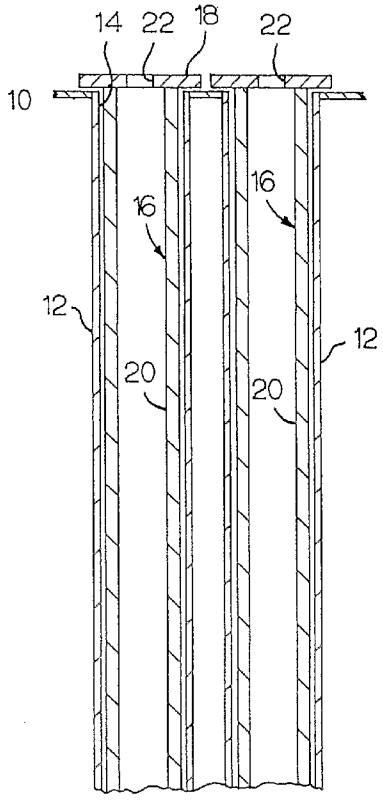
(74) Agent: **CAMORIANO, Theresa,Fritz**; Camoriano and Associates, 8225 Shelbyville Road, Louisville, KY 40222 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH,

[Continued on next page]

(54) Title: TOOL FOR LOADING REACTOR TUBES



(57) Abstract: The present invention provides a tool (16) that can be used to load catalyst into a chemical reactor and to measure the outage in the reactor tube (12). The tool provides a way to prevent dust from accumulating on the upper tube sheet of the reactor while loading catalyst into the reactor tubes.

WO 2004/085051 A1

GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.