

Dipak Mazumdar

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72
papers

1,489
citations

23
h-index

37
g-index

74
ext. papers

1,638
ext. citations

2
avg, IF

4.79
L-index

#	Paper	IF	Citations
72	The Physical and Mathematical Modelling of Gas Stirred Ladle Systems.. <i>ISIJ International</i> , 1995 , 35, 1-20	1.7	198
71	The Physical and Mathematical Modelling of Continuous Casting Tundish System.. <i>ISIJ International</i> , 1999 , 39, 524-547	1.7	142
70	Mixing models for gas stirred metallurgical reactors. <i>Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science</i> , 1986 , 17, 725-733		81
69	Hydrodynamic modeling of some gas injection procedures in ladle metallurgy operations. <i>Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science</i> , 1985 , 16, 83-90		70
68	Modeling of Fluid Flow and Residence Time Distribution in a Four-strand Tundish for Enhancing Inclusion Removal. <i>ISIJ International</i> , 2008 , 48, 38-47	1.7	57
67	Macroscopic Models for Gas Stirred Ladles. <i>ISIJ International</i> , 2004 , 44, 447-461	1.7	50
66	Modeling of Slag Eye Area in Argon Stirred Ladles. <i>ISIJ International</i> , 2010 , 50, 1622-1631	1.7	47
65	A model for estimating exposed plume eye area in steel refining ladles covered with thin slag. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2004 , 35, 400-404	2.5	40
64	Modeling of Mixing in Ladles Fitted with Dual Plugs. <i>ISIJ International</i> , 2005 , 45, 677-685	1.7	40
63	Modeling Energy Dissipation in Slag-Covered Steel Baths in Steelmaking Ladles. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2010 , 41, 976-989	2.5	38
62	Modeling of Steelmaking Processes		38
61	Mixing time and correlation for ladles stirred with dual porous plugs. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2005 , 36, 479-487	2.5	37
60	On mathematical models and numerical solutions of gas stirred ladle systems. <i>Applied Mathematical Modelling</i> , 1993 , 17, 255-262	4.5	37
59	An Assessment of Fluid Flow Modelling and Residence Time Distribution Phenomena in Steelmaking Tundish Systems. <i>ISIJ International</i> , 2004 , 44, 1334-1341	1.7	33
58	An Assessment of a Two Phase Calculation Procedure for Hydrodynamic Modelling of Submerged Gas Injection in Ladles.. <i>ISIJ International</i> , 1994 , 34, 384-392	1.7	33
57	Modelling criteria for flow simulation in gas stirred ladles: experimental study. <i>Ironmaking and Steelmaking</i> , 2000 , 27, 302-309	1.3	31
56	Modeling and Optimisation of Gas Stirred Ladle Systems. <i>ISIJ International</i> , 2017 , 57, 286-295	1.7	30

55	Mixing Models for Slag Covered, Argon Stirred Ladles. <i>ISIJ International</i> , 2010 , 50, 1117-1124	1.7	30
54	Hydrodynamic performance of steelmaking tundish systems: a comparative study of three different tundish designs. <i>Steel Research = Archiv Für Das Eisenhüttenwesen</i> , 1997 , 68, 293-300		30
53	Mathematical modelling of fluid flow, heat transfer and solidification phenomena in continuous casting of steel. <i>Steel Research = Archiv Für Das Eisenhüttenwesen</i> , 1995 , 66, 199-205		30
52	Possible roles of upper slag phases on the fluid dynamics of gas stirred ladles. <i>Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science</i> , 1988 , 19, 507-511		30
51	Dynamic similarity considerations in gas-stirred ladle systems. <i>Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science</i> , 1990 , 21, 925-928		28
50	Tundish Metallurgy: Towards Increased Productivity and Clean Steel. <i>Transactions of the Indian Institute of Metals</i> , 2013 , 66, 597-610	1.2	23
49	Similarity considerations in the physical modelling of steel making tundish systems. <i>Steel Research = Archiv Für Das Eisenhüttenwesen</i> , 1995 , 66, 14-19		21
48	Physical and mathematical modelling of flow and residence time distributions in different tundish designs. <i>Steel Research = Archiv Für Das Eisenhüttenwesen</i> , 2001 , 72, 97-105		19
47	On the estimation of plume rise velocity in gas-stirred ladles. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2002 , 33, 937-941	2.5	17
46	Mathematical modeling of particle segregation during centrifugal casting of metal matrix composites. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2006 , 37, 1675-1687	2.3	16
45	Numerical computation of flow and mixing in ladle metallurgy steelmaking operations (C.A.S. method). <i>Applied Mathematical Modelling</i> , 1986 , 10, 25-32	4.5	16
44	Review, Analysis, and Modeling of Continuous Casting Tundish Systems. <i>Steel Research International</i> , 2019 , 90, 1800279	1.6	16
43	Reduction of Tundish Skull and Yield Improvement in Steel Plants Through Physical Modeling of Steelmaking Tundish Systems. <i>Transactions of the Indian Institute of Metals</i> , 2011 , 64, 593-605	1.2	15
42	Effects of Nozzle Radial Position, Separation Angle, and Gas Flow Partitioning on the Mixing, Eye Area, and Wall Shear Stress in Ladles Fitted with Dual Plugs. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2019 , 50, 1490-1502	2.5	14
41	Mass transfer between solid and liquid in vessels agitated by bubble plume. <i>Steel Research = Archiv Für Das Eisenhüttenwesen</i> , 1990 , 61, 339-346		13
40	Modeling and Measurements of Intermixing Time in a Water Model of a Four Strand Steelmaking Tundish System. <i>Transactions of the Indian Institute of Metals</i> , 2013 , 66, 281-295	1.2	12
39	Experimental validation of flow and tracer-dispersion models in a four-strand billet-casting tundish. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2005 , 36, 777-785	2.5	12
38	Numerical computation of flow phenomena in gas-stirred ladle systems. <i>Steel Research = Archiv Für Das Eisenhüttenwesen</i> , 1991 , 62, 16-23		12

37	Evidence for amphoteric behavior of Ru on CdTe surfaces. <i>Applied Physics Letters</i> , 1986 , 48, 472-474	3.4	12
36	Mathematical Modeling and Validation of Wall Shear Stress in Gas Stirred Vessels. <i>ISIJ International</i> , 2008 , 48, 1033-1035	1.7	11
35	Transient, Multiphase Simulation of Grade Intermixing in a Tundish Under Constant Casting Rate and Validation Against Physical Modeling. <i>Jom</i> , 2018 , 70, 2139-2147	2.1	8
34	Mass transfer between solid and liquid in a gas-stirred vessel. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 1997 , 28, 95-102	2.5	8
33	Dimensionless correlations for forced convection in liquid metals: Part II. two-phase flow. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2001 , 32, 247-252	2.5	8
32	Transient Flows in Gas Stirred Vessels during Initial and Post Gas Injection Periods.. <i>ISIJ International</i> , 2003 , 43, 132-134	1.7	8
31	A Physical Model Study of Two-Phase Gas-Liquid Flows in a Ladle Shroud. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2018 , 49, 1945-1962	2.5	7
30	Numerical Analysis of Turbulence Inhibitor Toward Inclusion Separation Efficiency in Tundish. <i>Transactions of the Indian Institute of Metals</i> , 2019 , 72, 889-898	1.2	6
29	Discussion on Modeling of Slag Eye Formation over a Metal Bath Due to Gas Bubbling. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2007 , 38, 497-499	2.5	5
28	Analyses of the dynamic processes of liquid metal filtration. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 1999 , 30, 891-900	2.5	5
27	A unified representation of the two-phase plume characteristics in gas-stirred ladle systems. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 1996 , 27, 704-708	2.5	5
26	Motions of alloying additions in the CAS steelmaking operations. <i>Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science</i> , 1993 , 24, 649-655		5
25	Dimensional Analysis and Mixing Phenomena in Bubble Stirred Ladles.. <i>ISIJ International</i> , 1998 , 38, 1150-1152	1.7	5
24	Some Considerations Concerning Empirical Correlations for Plume (Spout) Eye Area in Slag Covered Metallic Melts. <i>ISIJ International</i> , 2003 , 43, 2076-2078	1.7	5
23	Shrouded Transfer of Molten Steel from Ladle to Tundish: Current Understanding, Mathematical Modelling and New Insight. <i>ISIJ International</i> , 2018 , 58, 1545-1547	1.7	5
22	Modeling of composite growth in the directed aluminum melt nitridation process. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1999 , 30, 2951-2958	2.3	4
21	Mathematical Modelling of Gas-Liquid, Two-Phase Flows in a Ladle Shroud. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2019 , 50, 1091-1103	2.5	4
20	Mathematical modelling of thermal fields in some heat treatment operations. <i>Steel Research = Archiv für Das Eisenhüttenwesen</i> , 1992 , 63, 194-200		3

19	Assessment of Tundish Process Performance at Industrial Scale. <i>Transactions of the Indian Institute of Metals</i> , 2020 , 73, 3079-3093	1.2	2
18	Physical and Mathematical Modeling of Two-Phase Flows in a HOLLOW JET NOZZLE. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2007 , 38, 819-831	2.5	2
17	A computational assessment of viscosity measurement in rotating viscometers through detailed numerical simulation. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2004 , 35, 805-809	2.5	2
16	Comparison of Several Numerical Prediction Methods for Thermal Fields during Phase Transformation of Plain Carbon Steels.. <i>ISIJ International</i> , 1991 , 31, 1441-1444	1.7	2
15	Discussion on Review of Physical and Numerical Approaches for the Study of Gas Stirring in Ladle Metallurgy. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2020 , 51, 412-416	2.5	2
14	Tundish Process Performance Parameters and Their Direct Estimation from a New, Plant Measurement-Based Formalism. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2021 , 52, 23-29	2.5	2
13	Measurements of Some Thermal Properties of Steel-Refractory Systems and Heat Losses from Steelmaking Furnaces. <i>Transactions of the Indian Institute of Metals</i> , 2015 , 68, 383-392	1.2	1
12	The modeling of flow phenomena in air-agitated pachuka tanks. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 1997 , 28, 727-732	2.5	1
11	Measurement and computation of drag forces in thermogravimetric studies. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2002 , 33, 891-896	2.5	1
10	High-pressure studies on lithium fast-ion conductors. <i>Journal of Materials Research</i> , 1987 , 2, 366-373	2.5	1
9	Modeling of Fluid Flow and Bulk Liquid Mixing Phenomena in a Mechanically Agitated Ladle. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2022 , 53, 304-319	2.5	1
8	Steady-State Materials and Enthalpy Balance: Applications to Ferroalloy Production and Industrial-Scale Validation. <i>Transactions of the Indian Institute of Metals</i> , 2019 , 72, 455-473	1.2	1
7	Physical Modelling of Nitrogen Variation in Continuously Cast Blooms Resulting from Atmospheric Exposure of Steel in Tundish during Initial Stages of Teeming. <i>ISIJ International</i> , 2022 , 62, 609-612	1.7	1
6	Review and Analysis of Metallurgical Processes in Blast Furnace Main Trough and Trough Performances. <i>Transactions of the Indian Institute of Metals</i> , 2022 , 75, 589	1.2	0
5	Swirling Flows in Side Blowing Reactors and Possible Advantages. <i>Transactions of the Indian Institute of Metals</i> , 2015 , 68, 669-673	1.2	
4	Heat Flow and Solidification Modeling of Industrial Scale, Ingot Casting Operation. <i>Transactions of the Indian Institute of Metals</i> , 2017 , 70, 1721-1733	1.2	
3	A correlation for estimation of mass transfer rates of solids in gas stirred ladle systems. <i>Steel Research = Archiv Für Das Eisenhüttenwesen</i> , 1996 , 67, 263-267		
2	Fluid Flow and Mixing Phenomena in Mechanically Agitated and Gas Stirred Ladle Systems and Their Comparisons. <i>ISIJ International</i> , 2022 , 62, 112-123	1.7	

1	Discussion on Numerical Study of Desulphurization Behavior during Kanbara Reactor Hot Metal Treatment	2.5
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