

# Table of Contents

	<b>Executive Summary</b>	05
<b>I</b>	<b>Introduction</b>	09
1.1	Minerology of bauxite - Bauxite quality and its importance	09
1.2	Types and characteristics of bauxite	13
1.3	Bauxite mining	14
1.4	Alumina refining process - An overview	15
<b>II</b>	<b>Bauxite Resources, Reserves and Production</b>	17
2.1	Bauxite resources and reserves across countries	17
2.2	Bauxite production across regions/countries	18
2.3	Profiles of major bauxite supplying countries	19
2.4	COVID-19 impact on the bauxite mining industry	27
<b>III</b>	<b>Bauxite Markets</b>	29
3.1	Metallurgical bauxite	31
3.1.1	Metallurgical bauxite consumption across countries	31
3.1.2	Bauxite consumption for smelter grade alumina production	35
3.2	Non-metallurgical bauxite	37
3.3	Upcoming bauxite projects	39
3.4	Upcoming alumina projects	41
3.5	Bauxite price analysis	42
<b>IV</b>	<b>World Bauxite Trade</b>	45
4.1	Trade dynamics	45
4.2	Trade policies and developments	48
<b>V</b>	<b>Bauxite Mining Technologies &amp; Industry 4.0</b>	50
5.1	Bauxite mining technologies: An overview	50
5.2	Industry 4.0 and bauxite mining	51
<b>VI</b>	<b>Key Players in Bauxite Mining</b>	60
6.1	Profiles of top bauxite mining companies	60
<b>VII</b>	<b>Conclusion</b>	70

# List of Tables

No.	Title	
1.1	Typical mineralogical composition of tropical bauxite	12
2.1	Bauxite: Reserves of major countries, 2019 (million tonnes)	17
2.2	Rio Tinto: Bauxite production (first 6 months ended June 30)	28
3.1	World metallurgical bauxite consumption by region, 2015 to 2019 (000 tonnes)	30
3.2	China alumina production trend, 2015-2019 (000 tonnes)	32
3.3	Australia alumina production trend, 2015-2019 (000 tonnes)	33
3.4	Australia alumina production trend, 2015-2019 (000 tonnes)	34
3.5	India alumina production trend, 2015-2019 (000 tonnes)	35
3.6	World metallurgical bauxite consumption for smelter grade alumina production, 2009-2019 (000 tonnes)	36
3.7	World smelter grade alumina production, 2009-2019 (000 tonnes)	37
3.8	Non-metallurgical bauxite requirements	38
6.1	Alcoa: Bauxite segment status (2019)	60
6.2	Alcoa: Bauxite mines (as of December 31, 2019)	61
6.3	Chalco: Bauxite mines (as of end 2019)	63
6.4	Hydro: Bauxite production, 2018 & 2019 (000 tonnes)	64
6.5	Rio Tinto: Bauxite mines (as of end 2019)	65
6.6	Rio Tinto: Bauxite production, 2018 & 2019 (000 tonnes)	65
6.7	Rusal: Bauxite mines (as of end 2019)	66
6.8	Hindalco: Bauxite production (000 tonnes)	67
6.9	NALCO: Bauxite production (000 tonnes)	67

# List of Figures

No.	Title	
E.1	World Bauxite production & other Aluminium Industry Parameters, 2019 (million tonnes)	05
E.2	Bauxite to Alumina: Top five - across the chain, 2019	07
1.1	Bauxite types and geographic distribution	13
1.2	Bauxite mining – Process flow	14
2.1	World bauxite production trend, 2009 to 2019 (million tonnes)	18
2.2	World bauxite production by countries, 2009 vs 2019	18
2.3	Australia's bauxite export to China, Jan 2019 to June 2020 (million tonnes)	27
3.1	Applications of bauxite	29
3.2	World metallurgical grade bauxite consumption, 2019 (%)	30
3.3	World Alumina Production, 2019	31
3.4	China: Bauxite & Alumina scenario, 2019	32
3.5	Australia: Bauxite & Alumina Scenario, 2019	33
3.6	Brazil: Bauxite & Alumina Scenario, 2019	34
3.7	India: Bauxite & Alumina scenario, 2019	35
3.8	World bauxite consumption for chemical grade alumina production, 2019 (%)	38
3.9	China - Average domestic prices of Bauxite, 2019 (US\$/tonne)	42
3.10	China Bauxite Import Prices, 2019 (US\$/tonne)	43
3.11	Baltic Dry Index, Jan 2019 to Dec 2019 (US\$/tonne)	44
4.1	World bauxite trade trends, 2001 to 2019 (million tonnes)	45
4.2	Global bauxite trade: Major exporters & importers, 2009 vs 2019	46
4.3	China's share of global aluminium bauxite import, 2001 to 2019 (%)	47
4.4	Major exporters of bauxite to China, 2019 (% share)	47
4.5	Indonesia bauxite export, 2009 to 2019 (million tonnes)	48
5.1	Hydro: Land use and rehabilitation - Paragominas	59