

ICS 13.030.20

CCS H 92

YS

**NONFERROUS METALS INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

YS/T 119.12-2010

**Determination and calculation of heat balance of special
equipments for alumina production. Part 12: Indirect heating
desiliconizing system**

氧化铝生产专用设备热平衡测定与计算方法 第12部分：间接加热脱硅系统
(English Translation)

Issued on: November 22, 2010

Implemented on: March 1, 2011

Issued by: Ministry of Industry and Information Technology

Table of Contents

Foreword

1 Scope

2 Thermal balance determination and calculation of the reference

2.1 Reference temperature

2.2 Reference pressure

2.3 Steam enthalpy unit conversion

2.4 Units

2.5 Determination of the scope and calculation of heat balance system

3 Status and process equipment

Foreword

YS/T 119 "equipment for the production of alumina Determination and calculation of heat balance," a total of 12 parts.

--- Part 1. clinker kiln system;

--- Part 2. roasting kiln system;

--- Part 3. vertical lime kiln;

--- Part 4. high pressure digestion system;

--- Part 5. evaporator;

--- Part 6. desilication system;

--- Part 7. melt the pipeline system;

--- Part 8. gas suspension calcination system;

--- Part 9. roaster fluidized systems;

--- Part 10. Plate falling film evaporator system;

--- Part 11. Single sleeve preheating - autoclave stripping system;

--- Part 12. desilication indirect heating system.

This is Part 12 YS/T 119's.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This standard by the national non-ferrous metals Standardization Technical Committee

(SAC/TC243) centralized.

This section drafted by the Aluminum Corporation of China Henan Branch.

This part of the Aluminum Corporation of China Shandong Branch, China Guizhou branch Chalco, China Aluminum Co. has Limited Guangxi Branch participated in the drafting.

1 Scope

YS/T 119 This part provides for alumina production (including sintering and joint law) crude was indirectly heated desilication system heat balance measurement Set and calculate the baseline measurement conditions, measurement items and measuring method of calculation.

This section applies to the production of alumina steam indirect heating thermal balance determination system and the continuous removal of silicon computing.

2.1 Reference temperature

Reference temperature using 0 °C.

2.2 Reference pressure

Reference pressure using 101325Pa.

2.3 Steam enthalpy unit conversion

Conversion card and Joule, using 1Cal = 4.1868J.

2.4 Units

Material balance and thermal balance 1m³ are calculated on the basis desiliconisation dope.

2.5 Determination of the scope and calculation of heat balance system

Heat balance measurement range and calculation system comprising. a multi-stage preheater, desilication machine, from the evaporator, condensed water tank insulation, and the buffer tank Line.

3 Status and process equipment

Content 3.1 condition of the test report 3.1.1 indicate the age of the equipment, characteristics and existing problems, and put into operation since the last overhaul or commissioning date.

3.1.2 Production and Equipment Overview

Production and equipment before the completion of a monthly average of three months before the test, the content and format of the report are shown in Table 1.