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| 1. **STOCKPILE:**
2. **RAW MILL(S):**

For quoting, please fill in information highlighted or underlined in yellow. 请填写用黄色突出显示或下划线的信息,以获取报价信息；To prepare a Simulator demo or if interested in a feasibility analysis or trial version, please fill in information highlighted in cyan.调试动态模拟器或者进行可行性研究或者测试工厂，请填写以青色突出显示的信息；Please, describe your production layout (P&ID). Bitte beschreiben Sie das Anlagenschema (R&I). Svp décrire le schéma de votre installation (P&ID). Por favor, decrir el diagrama de los equipos instalados y el instrumental (DTI).**Please use one questionnaire per raw mill or stockpile plant!** **请描述您的生产流程，请提供带设备以及仪表的生产流程图（P&ID）；****请对每个生料厂或均化堆场使用一份调查问卷！** |

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| **QUESTIONS: 问题:****Raw Mix: 生料:*** Mill type (Ball mill, vertical)?, number of mills?, number of clinker types? 磨机类型 (管磨, 立磨)？磨机数量？ 熟料类型及熟料类型数量？生料磨为立磨，两台；熟料为通用硅酸盐熟料，生产一种熟料。Two VRMs, one clinker type: Ordinary Portland clinker
* Homogenizing silos?, what kind? 生料均化库数量、类型？均化库为充气连续型均化库，一座均化库 one CF silo
* Quantity of dust returned through the mill filter? 通过磨机返回的粉尘量？
* Feeding systems (weighing feeders, stroke feeders)? 喂料系统（称重喂料器、行程喂料器）?称重喂料皮带秤(申克秤SCHENK weight feeder)

**Stockpile:** **预均化堆场*** Number of stockpiles?, stockpile type (longitudinal, circular. Windrow-type homogenization, strata-type homogenization) ?, capacity of each stockpile ? 原料预均化库？堆料类型（纵向、圆形、料堆式均质、地层式均质）？每个预均化库的容量？石灰石预均化堆场为矩形料堆，容量为70000吨。Longitudinal prehomo silo with capacity of 70,000t
* Is all the stockpile material crushed?, What kind of materials is passing through the crusher? 所有进入预均化的材料都被破碎了吗？什么样的材料通过破碎机？石灰石 Limestone
* Type of crusher? , feeding systems (trucks, buckets; weighing feeders, stroke feeders)? 破碎机类型？ 破碎机类型，喂料系统（卡车、铲斗、称重给料机、行程喂料机）？

**General:** **所有的应用类型:*** Difficulties in the overall system? , variations, disturbances on input materials, on feeders, or others? 系统性困难？原材料的波动？喂料装置？其他？配料过程遇到的主要问题有堵料、物料成分不稳定、喂料秤计量不准确；material blockages, unstable chemistry of materials and inaccuracy of weight feeders.
* How do you perform the analytical quality control: location, frequency, sampling? 如何进行分析质量控制：位置、频率、取样？
* Flowrate in % resp. T/h? 流量以百分比表示还是T/h？ 以T/h显示
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| **QUALITY CONTROL PLANNED (BASIS)** **质量控制计划（基本信息）** |
| Quality control (check only one; eventually, fill in a second questionnaire): 质量控制（只勾选一项，最后填写第二份问卷）： [ ]  Stockpile with weigh feeders料堆前有称重给料机 [ ]  Stockpile without weigh feeder (e.g., trucks, buckets) 料堆无称重给料机（例如卡车、铲车） [x]  Raw mill (with weigh feeders) [x]  生料磨机（带称重给料机）  单控制流均化库 批次控制均化库Nb数量: …………… If two raw mills or two stockpiles, run: 如果有两个生料磨机或两个料堆，则运行[ ]  sequentially [x]  in parallel [ ]  顺序运行[x] 同时运行Quality measurement system(s) used:[x]  OLA\* (……….) [x]  Lab XRF [ ]  Lab XRD [ ]  ADS\*\* (……….) [ ]  other: ………………..使用的成分分析设备: [x]  OLA在线分析仪 \* (…………….) [x]  XRF [ ]  other: ………………..Desired control type: 所需控制类型：[ ]  Correcting inner loop based on measured results of …………根据测量结果校正内环…………  [ ] 分批次配方控制 [x] 连续控制 [ ]  Other: 其他: ……………………………………………………………………………..…………..Additional quality control (see e.g. O\_Blend Cement RawMix Compensator): 额外的质量控制（例如，见O\_BLEND水泥生料混合补偿器）： [x]  Correcting outer loop based on XRF 基于XRF的外环校正 [ ]  Other: ……………………………………………………………………………..…………..\* On-line elemental analyzer在线分析仪\*\* At-line XRD spectrometer 在线x光衍射分析仪 |
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| **TRADITIONAL QUALITY SETTINGS****质量设置****Total number of targets and/or limits included in standard version of****- O\_Blend Cement RawMix, O\_Blend Cement Stockpile Optimizer: 2****- O\_Blend Cement Stockpile Control: 1****标准版本中包含的目标和/或限制总数****- O\_Blend 水泥生料, O\_Blend 水泥库存优化器: 2****- O\_Blend 水泥库存控制: 1** |
| Quality modules or oxides to control on desired targets: 率值或氧化物含量的控制目标： [ ]  LS [ ]  AR [ ]  SR Others:……………….. …………………..[x]  LS石灰饱和系数[x]  AR [x]  SR 其他 :石灰包和系数为：水硬率（HM）Quality modules or oxides to control:控制的率值或氧化物含量：[ ]  LS [ ]  AR [ ]  SR Others:……………….. …………………..Quality modules or oxides to limit by desired bound: 氧化物含量按范围监控: [ ]  MgO [ ]  SO3 [ ]  Al2O3 [ ]  Fe2O3 Others:……………….. …………………..[x]  MgO（0--3%）[x]  SO3 🞎Al2O3🞎Fe2O3 其他：[x] 低碱Na2O+0.658×K2O≦0.75%Tonnage window with desired quality [T]: ……………………控制目标设定以及变化范围 [T]:

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| **Quality module/ oxide率值/ 氧化物** | **Type**(double-click and move up selection) **类型**（双击鼠标，可选内容） | **Value target/ bound目标值/ 上下限** | **Priority**(1: highest) **优先考虑**(1: 最高值) | **Current / desired tolerance for tonnage window/batch** (LB ≤ target ≤ UB)**期望值**(下限 ≤目标 ≤ 上限) | **Current / Desired Standard deviation for tonnage window/batch****期望的标准偏差** |
| HM |  |  | 1 | HM(目标值）±0.08 |  |
| SR |  |  | 2 | SR(目标值）±0.10 |  |
| AR |  |  | 3 | AR(目标值）±0.10 |  |
| Fe2O3 |  |  |  |  |  |
| …… |  |  |  |  |  |

***Note:*** *Max. number of quality targets = number of input materials (feeders) – 1* [ ]  Recipe management for different clinker types (option)[ ]  不同熟料类型的配方管理 (可选项) |

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| **COST-OPTIMIZING QUALITY SETTINGS** |
| Interested in a study using the O\_Blend dynamic simulator (‘digital twin’) to reduce raw material costs by reformulating the quality settings incl. efficient compensation of perturbations with worst-case raw material chemistries: [ ]  yes [ ]  no Explain:……………….. …………………..Reduction of corrective costs desired: [ ]  yes [ ]  no Explain:……………….. …………………..Increased use of alternative raw materials (ARMs) desired: [ ]  yes [ ]  no Explain:……………….. …………………..Quality modules or oxides to control *within desired ranges*: [ ]  LS [ ]  AR [ ]  SR Others:……………….. …………………..Quality modules or oxides to limit by desired bound: [ ]  MgO [ ]  SO3 [ ]  Al2O3 [ ]  Fe2O3 Others:……………….. …………………..

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| **Quality module/ oxide** | **Type**(double-click and move up selection)  | **Value target/ bound/ *range*** | **Priority**(1: highest) | **Current / desired tolerance for tonnage window/batch** (LB ≤ target ≤ UB) |
| LS |  |  |  | LB / UB |
| SR |  |  |  | LB / UB |
| SR |  |  |  | LB / UB |
| AR |  |  |  | LB / UB |
| Al2O3 |  |  |  |  |
| …… |  |  |  |  |

For existing customers, please update Annex 1 with: [ ]  new raw materials[ ]  average and worst-case chemistries (e.g. average(min SiO2/max SiO2)[ ]  feeders with new mixes of raw materials (e.g. 70%clay/30% contaminated soils or decalcinated material) |

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| **QUALITY BATCH CONTROL (if applicable) 质量批次控制（如果适用）** |
| Actions during starting silo/pile: 启动喂料后： [ ]  Initialize feeder proportions on feeder proportion averages of previous silo/pile [ ]  根据以前的给料机配比平均值初始化给料机配比 [ ]  Down weight first X tonnages (e.g. corresponding to time delay of XRF meas.): X = …….. [ ]  先减少 X 吨 (例如：因XRF的测量时间延时.)： X = …….. [ ]  Start master loop for batch targets (stronger actions) after X tonnages: X = ……. [ ]  X 吨后按照配方目标启动主回路 (有效方案) X 吨： X = ……. Action during ending silo: 喂料结束前：[ ]  Variable tonnage target SP\_MTO (min / average / max): ……… / …………. / ………..[ ]  吨数变化范围 SP\_MTO (最小值 / 平均值 / 最大值): ……… / …………. / ………..Receding horizon tonnages and update frequency of master loop减少主回路的吨数以及更新频率(**evtl. change default values**): (**evtl. 更改默认值**)：**1) For OLA: 在线分析仪:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Zone#****范围#** | **Zone start [%SP\_MTO] 启动范围** | **Zone end [%SP\_MTO] 结束范围** | **Horizon [t] 范围 [t]** | **Frequency #OLA meas. 频率 #OLA在线分析仪 测量.** |
| 1 | 10 | 80 |  | 8 |
| 2 | 80 | 96 |  | 8 |
| 3 | 96 | 100 |  | 8 |
| 4 | 100 | >100 |  | 8 |

**2) For XRF:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Zone#****范围#** | **Zone start [%SP\_MTO] 启动范围** | **Zone end [%SP\_MTO] 结束范围** | **Horizon [t] 范围 [t]** | **Frequency #XRF meas. #XRF测量频率**  |
| 1 | 20 | 50 |  | 8 |
| 2 | 50 | 70 |  | 8 |
| 3 | 70 | 92 |  | 8 |
| 4 | 92 | 100 |  | 8 |
| 5 | 100 | >100 |  | 8 |

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| **OPTIMIZER FOR TOTAL FLOW RATE (if applicable) 总流量优化器(如果适用)** |
| [ ]  not required (setpoint for total flow rate adjusted by operator).[ ]  不需要的 (操作员调整的总流量设定值).[ ]  in place. 已有Supplier供应商: ………………………… SW Name软件名称: ………………………………..[ ]  planned. Supplier供应商: ………………………… SW Name软件名称: ………………………………..[ ]  quote for O\_Blend MaxMill的报价Max. total flow rate of the input material feeders (T/h): …………….…输入物料给料机的总流量最大值 (T/h): …………….…   [ ]  Smooth change of a feeder proportion (e.g. due to a harder raw material). 平稳改变进料比例（例如，由于原料较硬。） Specify具体说明: ……………………………………………………. |

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| **STOCKPILE COUNTING SYSTEM PLANNED (if applicable)** **准备配备库存盘点系统（如适用）** |
| Stacking method: 堆料方案:[ ]  Longitudinal 矩型堆场 [ ]  Circular圆堆[ ]  Chevron type V型堆垛 [ ]  Windrow type 料堆 [ ]  Coneshell type锥壳堆[ ]  Other: 其他……………………………………………………………………………..…………..Longitudinal: 矩型堆场[ ]  Display layer plot显示料层图 Signal ‘trigger’ for layer change available信号“触发器”可用于料层更改: [ ]  yes [ ]  no[ ]  Display row plot显示行布局 Signal ‘trigger’ for row change available信号“触发器”可用于行更改： : [ ]  yes [ ]  no[ ]  Other其他: ………………………………………………………………………..……………………..Circular: 圆堆[ ]  Display angular section plot for stacker显示堆料机的角度剖面图 Signal ‘trigger’ available有信号“触发器”: [ ]  yes [ ]  no[ ]  Display angular section plot for reclaimer (option) 显示取料机的角度剖面图 (可选) Signal ‘trigger’ available有信号“触发器: [ ]  yes [ ]  no[ ]  Other其他: ………………………………………………………………………..…………………… |

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| **INPUT MATERIALS / FEEDERS (FD) 输入原料 / 给料机** |
| Please, fill in the table below regarding the bin/feeder Nr according to P&ID (if available):假如有请根据P&ID填写关于料仓/给料机编号的下表： |
| Bin / FD Nr料仓/给料机编号 | Input material grade type(limestone, clay, pyrite, …)(can be a mix of raw materials) 输入物料等级类型(石灰石、粘土、铁矿, …)(可以是原材料的混合物) | Time delay between bin/feeder and OLA/XRF/… [min] 料仓/给料机与 OLA在线分析仪 /XRF/…之间的时间延迟 [分钟] | Feeder flow proportion [%-AsR](average)给料机流量比例[%-AsR](平均) | Min. flowrate [AsR-T/h]最小流量 | Limits [%-AsR] 限制  |
| Min最小 | Max最大 |
|  | 石灰石 Limestone | how to determine the delays? | 80-85 |  |  |  |
|  | 黏土 Clay | how to determine the delays? | 7-7.5 |  |  |  |
|  | 选矿废渣粉末 iron/Tailing | how to determine the delays? | 3-3.5 |  |  |  |
|  | 砂岩 sandstone | how to determine the delays? | 6-6.5 |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Fixed input material grade type(s) for each bin/feeder\*: 每个料仓/给料机的固定输入物料等级类型\*: [x]  yes [ ]  no All input materials fed through the measurement system (OLA or XRF): 所有材料都是通过检测系统输入的 (OLA在线分析仪 or XRF): [x]  yes[ ]  no Explain解释: ………………………………………………… If several raw mills or stockpiles, use of the same input material grade type(s):如果有多个生料磨或料堆，则使用相同的输入材料等级类型: [x]  yes [ ]  no \*i.e. raw material is sorted according to fixed pre-defined grade types \*原材料根据固定的预定义等级类型进行分类 |

AsR: as received收到基

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| **OXIDE COMPOSITION, MOISTURE AND COSTS OF INPUT MATERIALS原材料的氧化物成分，水分和成本****Costs are negative for income and should include e.g. CO2 savings成本为负值的原材料会带来制造成本的节约****If available, specify two worst-case scenarios (WCS) that happen ‘frequently’如果可能，请举出2个最差工况的例子**Any trends or archives available是否可以提供最差工况的曲线图: [ ]  Yes [ ]  No  |
| Bin / Feeder Nr or input material料仓/给料机编号或输入材料 | Component成分 | Ave-rage平均 | Min最小 | Max 最大 | WCS1最差工况 1 | WCS2最差工况 1 | Costs/ ton原材料吨成本 |
| …………………WCS1: ……….WCS2: ………. | CaO |  |  |  |  |  |  |
| SiO2 |  |  |  |  |  |
| Al2O3 |  |  |  |  |  |
| Fe2O3 |  |  |  |  |  |
| Moisture**水分** |  |  |  |  |  |
|  |  |  |  |  |  |
| …………………WCS1: ……….WCS2: ………. | CaO |  |  |  |  |  |  |
| SiO2 |  |  |  |  |  |
| Al2O3 |  |  |  |  |  |
| Fe2O3 |  |  |  |  |  |
| Moisture**水分** |  |  |  |  |  |
|  |  |  |  |  |  |
| …………………WCS1: ……….WCS2: ………. | CaO |  |  |  |  |  |  |
| SiO2 |  |  |  |  |  |
| Al2O3 |  |  |  |  |  |
| Fe2O3 |  |  |  |  |  |
| Moisture**水分** |  |  |  |  |  |
|  |  |  |  |  |  |
| …………………WCS1: ……….WCS2: ………. | CaO |  |  |  |  |  |  |
| SiO2 |  |  |  |  |  |
| Al2O3 |  |  |  |  |  |
| Fe2O3 |  |  |  |  |  |
| Moisture**水分** |  |  |  |  |  |
|  |  |  |  |  |  |
| …………………WCS1: ……….WCS2: ………. | CaO |  |  |  |  |  |  |
| SiO2 |  |  |  |  |  |
| Al2O3 |  |  |  |  |  |
| Fe2O3 |  |  |  |  |  |
| Moisture**水分** |  |  |  |  |  |
|  |  |  |  |  |  |
| …………………WCS1: ……….WCS2: ………. | CaO |  |  |  |  |  |  |
| SiO2 |  |  |  |  |  |
| Al2O3 |  |  |  |  |  |
| Fe2O3 |  |  |  |  |  |
| Moisture**水分** |  |  |  |  |  |
|  |  |  |  |  |  |

CaO, SiO2, Al2O3, Fe2O3 in %-dry氧化物成分为干基

Moisture in %-AsR (as received)水分为收到基

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| **MINERALOGICAL COMPOSITION (if XRD available)矿物组成****If available, specify two worst-case scenarios (WCS) that happen ‘frequently’如果可能，请举出2个最差工况的例子**Any trends or archives available: [ ]  Yes [ ]  No  |
| Bin / Feeder Nr or input material料仓/给料机编号或输入材料 | Component成分 | Ave-rage平均  | Min最小 | Max 最大 | WCS1最差工况 1 | WCS2最差工况 1 |
| ………………… | Calcite |  |  |  |  |  |
| Quartz |  |  |  |  |  |
| Pyrite |  |  |  |  |  |
| Kaolinite |  |  |  |  |  |
| Dolomite |  |  |  |  |  |
| … |  |  |  |  |  |
| ………………… |  |  |  |  |  |  |
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in %-dry

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| **CUSTOMER AUTOMATION SYSTEM 客户自动化系统**  |
| [ ]  in place已有 or [ ]  planned 计划配置[ ]  PLC, 品牌： type: …西门子 or Alan Bradly………………………………………………… PLC components with reference numbers: ……………………………PLC模块型号：一线生料L81E，二线生料L61E …………………………… ……………………………[ ]  HMI (Human Machine Interface人机界面), type类型: …………………… [ ]  Network, type网络， 类型：:……………………………………………….. Network layout: 网络布局： |

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| **CURRENT FEEDER SYSTEM 1给料机系统 1** |
| [ ]  in place 已有or [ ]  planned 计划配置Feeder type (apron, weight, other…):给料机类型 (板式给料机，称重给料机，其他…) ………………..……………………[ ]  manual手动 or [x]  automated 自动 Supplier供应商: ………………………………… precision精度: ………………………Feeder bins are always filled喂料仓始终充满物料: [ ]  yes是 [ ]  no不是 Explain请解释: ……………………Connected to customer PLC: 与 PLC连接: [ ]  yes是 (recommended推荐)[ ]  no 不是 If not connected to PLC, available interface: 如果没有连接到PLC, 可用接口有：[ ]  4-20mA [ ]  0-10V [ ]  S7 Industrial Ethernet 工业以太网 [ ]  Profibus DP [ ]  other其他: ……………… Switch between manual and automatic mode: 在手动和自动模式之间切换开关： [ ]  Implemented on customer PLC/HMI by customer 由客户在客户PLC/HMI上实施 [ ]  Other: 其他……………… |

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| **CURRENT FEEDER SYSTEM 2给料机系统 2** |
| [ ]  in place 已有or [ ]  planned 计划配置Feeder type (apron, weight, other…):给料机类型 (板式给料机，称重给料机，其他…) ………………..……………………[ ]  manual手动 or [x]  automated 自动 Supplier供应商: ………………………………… precision精度: ………………………Feeder bins are always filled喂料仓始终充满物料: [ ]  yes是 [ ]  no不是 Explain请解释: ……………………Connected to customer PLC: 与 PLC连接: [ ]  yes是 (recommended推荐)[ ]  no 不是 If not connected to PLC, available interface: 如果没有连接到PLC, 可用接口有：[ ]  4-20mA [ ]  0-10V [ ]  S7 Industrial Ethernet 工业以太网 [ ]  Profibus DP [ ]  other其他: ……………… Switch between manual and automatic mode: 在手动和自动模式之间切换开关： [ ]  Implemented on customer PLC/HMI by customer 由客户在客户PLC/HMI上实施 [ ]  Other: 其他……………… |

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| **OLA (………) ANALYZER在线分析仪** |
| [ ]  in place 已安装or [ ]  planned 计划安装Supplier供应商: ……热电Thermo Fisher…………………………… Device model: …………………………………….Connected to customer PLC: 已连接到客户plc[ ]  yes连接 (standard标准)[ ]  no 尚未连接 If not connected to PLC, available interface如果尚未连接到plc，哪些界面可?:[ ]  via file exchange 通过文件交换(standard标准) [ ]  OPC UA [ ]  OPC DA [ ]  4-20mA [ ]  0-10V [ ]  other其他: ……………… Distance/Delay between feeders and OLA location喂料秤和在线分析仪之间的距离/时间延迟 (in meters and minutes以米和分钟来表示): …………..Delay between OLA location and measurement result (in minutes在线分析仪和出没生料取样器之间的延迟，以分钟表示): ………………………Time constant in raw mill&separator 生料磨和选粉机的工艺时间延迟(in minutes以分钟表示): …………..Measurement frequency在线分析仪的检测频次 (in minutes以分钟表示): ………………………Number of measurements per silo or stockpile均化库/均化堆场填充的取样测量次数: …………..Precisions分析仪标定: [ ]  static静态 [ ]  dynamic动态

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| CaO | SiO2 | Fe2O3 | Al2O3 |  |  |  |  |  |
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If applicable如果适用: Sampling and preparation methods取样和样品制备方法:[ ]  cumulated over a period (in minutes) of综合样品, 累积的分钟数: ……………[ ]  spot瞬时样 [ ]  Other其他样品: ………………[ ]  fully automatic including pneumatic sample transfer from raw mill完全自动: 取样和气力样品传送[ ]  manual sample transfer, preparation, and analysis. 手动样品传送制备和分析[ ]  exact sample collection time known[ ]  Other其他: ……………… |

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| **ADS (………)** |
| [ ]  in place已安装 or [ ]  planned 计划安装Supplier供应商: ………………………………… Device model设备型号: …………………………………….Connected to customer PLC已连接到客户plc: [ ]  yes已连接 (standard标准)[ ]  no 尚未连接 If not connected to PLC, available interface:如果还没有连接到plc, 有哪些可用界面[ ]  via file exchange通过文件交换(standard标准) [ ]  OPC UA [ ]  OPC DA [ ]  4-20mA [ ]  0-10V [ ]  other其他: ……………… Distance/Delay between feeders and ADS location (in meters and minutes) 喂料秤和ADS之间的距离/时间延迟 (in meters and minutes以米和分钟来表示):: …………..Delay between ADS location and measurement result (in minutes): ADS和出磨生料取样器之间的延迟，以分钟表示): ……………………… ………………………Time constant in raw mill&separator 生料磨和选粉机的工艺时间延迟(in minutes以分钟表示): …………..Measurement frequency在线分析仪的检测频次 (in minutes以分钟表示): ………………………Number of measurements per silo or stockpile均化库/均化堆场填充的取样测量次数: …………..Precisions分析仪标定: [ ]  static静态 [ ]  dynamic动态

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| CaO | SiO2 | Fe2O3 | Al2O3 |  |  |  |  |  |
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If applicable如果适用: Sampling and preparation methods取样和样品制备方法:[ ]  cumulated over a period (in minutes) of综合样品, 累积的分钟数: ……………[ ]  spot瞬时样 [ ]  Other其他样品: ………………[ ]  fully automatic including pneumatic sample transfer from raw mill完全自动: 取样和气力样品传送[ ]  manual sample transfer, preparation, and analysis. 手动样品传送制备和分析[ ]  exact sample collection time known[ ]  Other其他: ……………… |

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| **LABORATORY XRF SPECTROMETER** |
| [ ]  in place已安装 or [ ]  planned 计划安装Supplier供应商: ………………………………… Device model设备型号: …………………………………….Connected to customer PLC已连接到客户plc: [ ]  yes已连接 (standard标准)[ ]  no 尚未连接 If not connected to PLC, available interface:如果还没有连接到plc, 有哪些可用界面[ ]  via file exchange通过文件交换(standard标准) [ ]  OPC UA [ ]  OPC DA [ ]  4-20mA [ ]  0-10V [ ]  other其他: ……………… Distance/Delay between feeders and sampling point (in meters and minutes): 喂料秤和出磨生料取样器之间的距离/时间延迟 (in meters and minutes以米和分钟来表示):: ………….. …………..Time constant in raw mill&separator (in minutes): 生料磨和选粉机的工艺时间延迟(in minutes以分钟表示):Delay between sampling point and measurement result (in minutes)从取样点到出检测结果的时间延迟以分钟表示: ………………………Measurement frequency (in minutes): 检测频率以分钟表示………………………Number of measurements per silo: 均化库填充的取样测量次数 …………..Sampling method:取样方法[ ]  cumulated over a period (in minutes) of综合样品, 累积的分钟数: ……………[ ]  spot瞬时样 [ ]  Other其他样品: ………………Sample preparation and XRF analysis:样品制备和荧光仪分析[ ]  fully automatic including pneumatic sample transfer from raw mill完全自动: 取样和气力样品传送[ ]  manual sample transfer, preparation, and analysis. 手动样品传送制备和分析[ ]  exact sample collection time known[ ]  Other其他: : ………………Precisions分析仪标定: [ ]  static静态 [ ]  dynamic动态

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| CaO | SiO2 | Fe2O3 | Al2O3 |  |  |  |  |  |
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| **LABORATORY XRD SPECTROMETER实验室衍射仪** |
| [ ]  in place已安装 or [ ]  planned 计划安装Supplier供应商: ………………………………… Device model设备型号: …………………………………….Connected to customer PLC已连接到客户plc: [ ]  yes已连接 (standard标准)[ ]  no 尚未连接 If not connected to PLC, available interface:如果还没有连接到plc, 有哪些可用界面[ ]  via file exchange通过文件交换(standard标准) [ ]  OPC UA [ ]  OPC DA [ ]  4-20mA [ ]  0-10V [ ]  other其他: ……………… [ ]  4-20mA [ ]  0-10V [ ]  other: ……………… Distance/Delay between feeders and sampling point (in meters and minutes): 喂料秤和出磨生料取样器之间的距离/时间延迟 (in meters and minutes以米和分钟来表示):: ………….. …………..Time constant in raw mill&separator (in minutes): 生料磨和选粉机的工艺时间延迟(in minutes以分钟表示):Delay between sampling point and measurement result (in minutes)从取样点到出检测结果的时间延迟以分钟表示: ………………………Measurement frequency (in minutes): 检测频率以分钟表示………………………Number of measurements per silo: 均化库填充的取样测量次数 …………..Sample preparation and XRF analysis:样品制备和衍射仪分析[ ]  fully automatic including pneumatic sample transfer from raw mill完全自动: 取样和气力样品传送[ ]  manual sample transfer, preparation, and analysis. 手动样品传送制备和分析[ ]  exact sample collection time known[ ]  Other其他: : ……………Precisions分析仪标定: [ ]  static静态 [ ]  dynamic动态

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| Calcite | Quartz | Pyrite | Kaolinite | Dolomite |  |  |  |  |
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| **CURRENT FULLY-AUTOMATIC BLENDING SOFTWARE现有的自动配料软件** |
| [ ]  in place and running 已安装并运行 or [ ]  already purchased and commissioning planned与采购并计划调试Supplier:供应商 ………………………………… Software name:软件名称 …………………………………….Connected to customer PLC连接到客户plc: [ ]  yes已连接 (standard标准)[ ]  no 尚未连接 If not connected to PLC, available interface:如果还没有连接到plc, 有哪些可用界面[ ]  4-20mA [ ]  0-10V [ ]  S7 Industrial Ethernet工业以太网 [ ]  Profibus DP [ ]  other: ……………… Switch between manual and automatic mode: 自动到手动的切换[ ]  Implemented on customer PLC/HMI by customer 客户已经通过plc或人机界面执行[ ]  Other:其他 ………………Interested in a feasibility study of O\_Blend Cement to reduce raw material costs:需要进行降低原材料成本的可行性研究[ ]  no 否 [ ]  yes是 If yes, please indicate your expected reduction (-.…%) as well as如果是的话请指出期望的降低比例,your changes in your process需要做出的工艺改进 (e.g. additional feeders, new raw materials, raw materials with increasing variability比如增加喂料秤，新的原材料，更便宜但是波动更大的原材料) and the possibility to change the quality objectives 优化质量指标的可能性(e.g. use bounds and ranges instead of targets比如使用控制范围来取代控制目标):1. …………………………………………………………………………………………………
2. …………………………………………………………………………………………………
3. …………………………………………………………………………………………………

Interested in trial version of O\_Blend Cement for benchmarking against existing software:同时使用两套软件进行对标[ ]  no否 [ ]  yes是 If yes, please indicate your primary goals why you consider to change the existing software (e.g. unachieved quality challenges, does not run unattended and requires intervention of a well-trained user):如果选择是，请给出替代目前软件的主要动机(比如质量控制不达标，运转率不够需要人力的介入)1. …………………………………………………………………………………………………
2. …………………………………………………………………………………………………
3. …………………………………………………………………………………………………

Please indicate the performance goals for O\_Blend Cement to be considered for purchase of the annual or life-time license:请指出采购并且使用O\_Blend想要达到的目的:1. …………………………………………………………………………………………………
2. …………………………………………………………………………………………………
3. …………………………………………………………………………………………………

If blending performance guarantee desired, please provide raw and rolling averages of laboratory and production data according to the Excel sheets 'O\_Blend Cement Planta Data.xls'.请按照Excel表格'O\_Blend Cement Planta Data.xls'提供实验室和生产的原始数据Remote access possible via:可用以下远程调试手段[ ]  Internet-VPN [ ]  Internet-TeamViewer[ ]  Other: ……………… |

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| **DESIRED CONFIGURATION FOR O\_BLEND MAIN PC 配料软件主机调试** |
| PC brand name主机品牌 (default, Industrial PC Siemens 默认为西门子工业服务器IPC427E): ………………………………………Shipping of PC & screen to主机发送至: [ ]  Site现场: ……. [ ]  other其他客户指定地址: ………………Import restrictions进口限制: [ ]  yes是 [ ]  no否 PC OS: [ ]  Win10 IoT Enterprise (standard) [ ]  other: …………….Language PC O\_Blend: [ ]  English [ ]  French [ ]  German [ ]  Other: ……………. Connection to customer PLC: 连接到客户plc[ ]  S7 Industrial Ethernet (standard; Y-link installed by customer if redundant customer CPU) [ ]  OPC UA (OPC UA Server on customer PC/server installed)[ ]  OPC DA (OPC DA Server on customer PC/server installed)[ ]  other: ………………Remote access possible via:可用以下远程调试手段[ ]  Internet-VPN [ ]  Internet-TeamViewer[ ]  Other: ……………… Uninterruptible Power Supply (UPS) for PC O\_Blend: 一些软件主机的可持续供电装置[ ]  use plant UPS 使用工厂UPS [ ]  signal available 信号可调用[ ]  install UPS unit specific for PC O\_Blend需要安装Language HMI:人机界面语言 [ ]  English [ ]  French [ ]  German [ ]  Other: ……………. |

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| **OPTION: SECOND O\_BLEND PC (E.G. PLACED IN THE LAB OR THE QUARRY)****第二套配的软件主机可选(放置于实验室或者矿山办公室)** |
| PC brand name 主机品牌(default, 默认Fujitsu): ………………………………………………Import restrictions进口限制: [ ]  yes 是否 [ ]  no PC OS: [ ]  Win10 (standard) [ ]  other: …………….Language PC O\_Blend: [ ]  English [ ]  French [ ]  German [ ]  Other: …………….Possible connection type to O\_BLEND MAIN PC: 连接到配料软件主机 [ ]  VNC and Ethernet TCP/IP (standard) [ ]  Other: ………………Physical connection (existing or planned) between SECOND O\_BLEND PC and O\_BLEND MAIN PC: 与主机的物理连接方式[ ]  Ethernet cable [ ]  Radio modem[ ]  Other:  ……………… |