SPRAY DRYING QUESTIONNAIRE

Company: Name:

|  |  |  |
| --- | --- | --- |
|  |  |  |

Tel: Country:

|  |  |  |
| --- | --- | --- |
|  |  |  |

E-mail:

|  |
| --- |
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| --- |
| **Product information (Please answer as many of the questions as possible)** |

Name of product: Use of product:

|  |  |  |
| --- | --- | --- |
|  |  |  |

Capacity, specify either feed, powder OR evaporation rate (kg/h):

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| Feed |  | Powder |  | Evaporation |

Total solids in feed/moisture in powder %: Temperature of feed oC:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
| Feed |  | Powder |  | Feed |  | Powder (max. acceptable) |

Sensitive to heat: Operating time at this capacity:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
| Feed |  | Powder |  | Hours/day |  | Hours/year |

|  |
| --- |
| **Site conditions** |

Altitude above sea level, m: Rel. humidity % at design amb. oC:

|  |  |  |
| --- | --- | --- |
|  |  |  |

Ambient temp. oC:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| Max |  | Min |  | Design |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Construction materials** | | | | | | |
|  |  | Please tick (x) | | |  |  |
|  |  | AISI 304 |  | AISI 316 |  | Other (specify) |
| Wet product contact parts: |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Dry product contact parts: |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Non-product contact parts: |  |  |  |  |  |  |

|  |
| --- |
| **Service utilities** |

Main air heating by means of:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | or |  | or |  | or |  |
| Steam |  | Natural Gas (indirect) |  | Natural Gas (direct) |  | Oil (indirect) |

Secondary air heating by means of:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | or |  | or |  | or |  |
| Steam |  | Natural Gas (indirect) |  | Natural Gas (direct) |  | Oil (indirect) |

High Pressure Steam: Low Pressure Steam:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Steam Pressure bar(g) |  | Steam Pressure bar(g) |

**Oil**

Heat of combustion: Viscosity of oil at 20 oC:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Oil (kJ/kg) |  | Centipoise (cP) |

**Natural Gas**

Heat of combustion: Gas pressure:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| kJ/Nm3 |  | bar(g) |

**Electricity** Other (specify)

|  |  |  |  |
| --- | --- | --- | --- |
| Number of phases (#): |  |  |  |
|  |  |  |  |
| Voltage between phases (V): |  |  |  |
|  |  |  |  |
| Number of cycles (Hz): |  |  |  |
|  |  |  |  |
| Max. motor size for direct start (kW): |  |  |  |

**Cooling water Ice water Compressed air**

Temperature in/out: Temperature in/out: Pressure:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| / |  | / |  |  |
| oC |  | oC |  | bar(g) |
| **Detailed description of feed and dry material** | | | | | |

Nature of feed (solution, dispersion, suspension):

|  |
| --- |
|  |

Properties of feed:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
| Density kg/m3 |  | pH value |  | Specific heat of solids KJ/kg oC |  | Viscosity mPa s (cP) @ 20 oC |

Properties of feed:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| Melting point oC |  | Heat of crystallization KJ/kg |  | Rheological properties |

Is the feed corrosive, abrasive or injurious to health?

|  |
| --- |
|  |

Properties of dry material:

|  |  |  |
| --- | --- | --- |
|  |  |  |
| KST value (bar\*m/s) |  | PMax(bar) |

Can it cause nuisance by strong odour, colour or other?

|  |
| --- |
|  |

Special requirements regarding the final powder (particle size and distribution, bulk density, colour, desired moisture content, solubility, dispersibility, wettability etc.)

|  |
| --- |
|  |

|  |
| --- |
| **Other** |

Special requirements regarding environment (emission, noise etc.)

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