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Mfg. : CERAMIC ROLLERS

ABOUT US

NOVA - TECH REFRACTORIES PVT. LTD. was established in 2006 with the sole purpose of providing

- The latest built with highest quality standards and precision of german technology and engineering design
- Production capacity of up to **2,40,000** Nos rollers per yearly



USER GUIDE

CERAMIC ROLLER CHARACTERISTICS

| Characteristics | Items | Types | | |
|---------------------|---|---|-----------|-----------|
| | | NT - 100 | NT - 200 | NT - 500 |
| Physical Properties | Bulk Density(g/cm ³) | 2.4 - 2.6 | 2.5 - 2.7 | 2.7 - 2.9 |
| | Apparent Porosity(%) | 15 - 20 | 14 - 18 | 14 - 18 |
| | Water Absorption(%) | 6 - 8 | 5 - 7 | 4 - 6 |
| | Thermal Expansion Coefficient (25 - 1000°C) | 5.7 - 6.0 | 5.6 - 5.9 | 5.6 - 5.9 |
| | Thermal Shock Resistance | Very Good | Very Good | Very Good |
| | Max. Working Temp.(°C) | 1200 | 1300 | 1350 |
| Composition | Al ₂ O ₃ (%) + ZrO ₂ | 70 - 72 | 75 - 77 | 78 - 80 |
| | SiO ₂ (%) | 21 - 23 | 21 - 23 | 17 - 19 |
| | Fe ₂ O ₃ (%) | 0.3 - 0.4 | 0.3 - 0.4 | 0.2 - 0.3 |
| Specification | | Diameter 25mm - 75mm, Length up to 5200mm | | |
| Linearity | | ≤0.07% x L | | |

Notice:

- The data above are verified from testing samples in the laboratory, for reference only in practical use.
- The highest working temperature of the roller is determined by specification and size, distance of sustaining point, central distance, load and loading breadth in the

How to use the roller affects not only the service life of the roller but also smooth work of the kiln. Generally, we select the type of roller depending on the maximum firing temperature and load of the roller. Meanwhile, the rotate speed, span of roller and atmosphere in the kiln are also important factors for us to consider, as well as the factors of the gas, molten materials and thermal shock.

Considering the factors mentioned above, our suggestions are the following:

- Before using the roller, apply protective coating on the surface evenly.
- Place the roller beside or on the kiln for drying. Only after the roller has been dried can it be put into kiln.
- Inserting coated roller to kiln should be completed in a short time, in order to avoid the roller to be heated too long in nonrotating state.
- Insert ceramic fibre to the both poles at depth 50-60mm.
- Keep the temperature in the kiln at a stable level. Change the new roller whenever any roller broken.
- When the kiln is warmed up to 300-400°C, Please insert the roller and increase temperature steadily.
- Whenever glaze droplets or alike deposits appear, the roller should be pulled out for cleaning and then applied with new protective coating.
- While the roller is pulled out from high temperature kiln, its bending should be avoided. Place it to a stand matted with thermal insulating material, rotate it continuously until it cools down to below 600°C, or cover it with thermal insulating blanket.
- Contact between hot roller and cold metal must be avoided.
- Don't use hard tool to knock at roller while cleaning.
- Keep the exhausting fan on and roller rotating after shutting down of kiln, turn off the other fans and prevent cold air coming. After 24 hours, increase the fan speed and take out the roller when the temperature in the kiln is 500C or below.
- For the kiln using coal gas, be sure to turn down exhausting fans in time after turning off coal gas and combustion air. The operation of the exchange heat fans depends on the pressure in the kiln in order to prevent leakage of the cold air and cool the kiln stably.