CHEMICAL

APPLICATION GUIDE BOOK

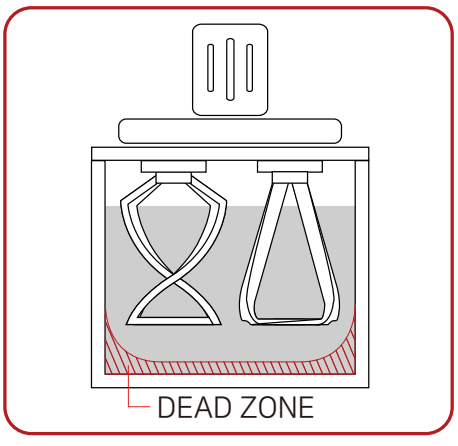
Dispersion of Liquid Rubber (High viscosity substances)

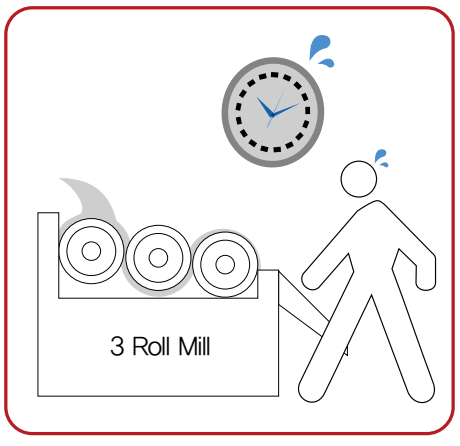
01 ▶ Dispersion of Liquid Rubber (High viscosity substances)

Liquid rubber is very versatile and is a material that is used in various fields. Rubber has excellent elasticity, ease of processing, and waterproofness. When processed into a liquid form, the application becomes more diverse. Most companies uniformly mix other functional additives with liquid rubber and process it according to the purpose, and use it for electromagnetic shielding and sealing of various electronic devices such as mobile phones and PCs, undercoating agents for water-proofing the floor of automobiles, and anti-corrosion coatings on the surface of ships. It is used for various purposes such as. However, this liquid rubber basically has a very high viscosity, so it takes a lot of time to evenly disperse additives, etc., and it is difficult to homogenize the rubber itself by dispersing it with strong energy. This problem is common to high-viscosity materials such as high-viscosity urethane, silicone, and epoxy, and is a problem that many companies are struggling with.

02 Problems With The Txisting Process

1) Many companies have used low-speed agitators such as planetary mixers and anchor mixers to handle the dispersion and mixing processes of high-viscosity materials, or milling equipment such as 3-roll mills.
2) When dispersing additives in high-viscosity materials such as rubber, urethane, or silicone, low-speed mixers such as planetary mixers or anchor mixers form DEAD-ZONEs at the bottom of the tank or the bottom corner of the tank where the power of the mixer does not reach, resulting in significantly reduced homo-geneity. Resolving requires either additional work or a fairly long period of stirring.
2) Milling equipment such as 3-roll mill has less DEAD-ZONE concerns, but manual work needs to be repeated by a person, and there is a limit to the amount of production due to the small throughput. In addition, due to the nature of the equipment, the rotation part is exposed, so there is a high risk of safety accidents.





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