

Safe production of polyurethane with LEWA process diaphragm pumps



Fig. 1: LEWA process diaphragm pump for the conveyance of raney-nickel

Toluylene diamine (TDA) as preliminary product and diaminotoluol (MDI) as well as toluene diisocyanate (TDI) as intermediate products play an important role for the production of polyurethane (PUR).

The production of TDA is carried out by the reaction of dinitrotoluene (DNT) and the use of nickel-raney as catalyst, both of these fluids require an absolute safe metering process. Above all the long-lasting experience with these demanding applications and the optimisation of process pumps for continuous operation has established LEWA as a partner for "safety and reliability" in this sector for over 20 years.

The following pump characteristics have made this success possible:

- Hermetic tightness (important for isocyanates)
- High operating pressures are possible without problems
- Suitable for suspensions (raney-nickel catalyst)
- Safe in continuous operation
- Low life cycle costs
- Very high availability and reliability
- Qualified after sales service worldwide

In the ranks of the most important polymers polyurethane must not be missed. The technological application area of PUR extends from the „PUR-sole“ to „PUR-foam“. The main application area of polyurethanes is the use of foam, e.g. for upholstered furniture, mattresses, sponges, winter clothes, coating of carpets, construction foams for thermal insulation, packing material etc. But polyurethanes are much more than foam: they can be also used as lacquers and adhesives, as thermoplastics for the production of rolls and cylinders, as elastomers and as fibres, e.g. as elasthan fibres / spandex.

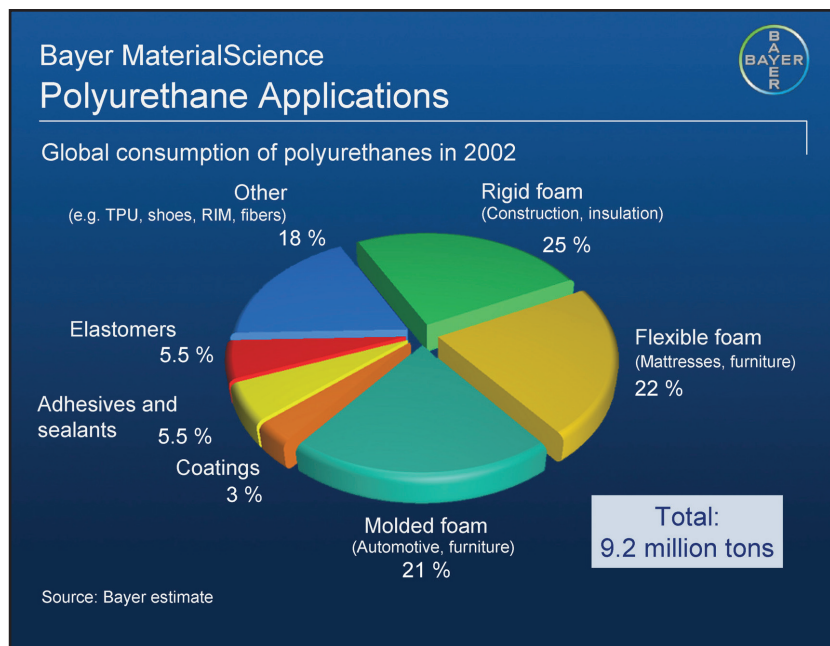


Fig. 2: Worldwide consumption of polyurethane (reference: Bayer Material Science)

The high customer benefit, the operational experience on site for many years and the expertise of the world market leader make LEWA an appreciated partner for the safe conveyance of preliminary and intermediate products in polyurethane production.

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