POLYMER MODIFIED BITUMEN (PMB)

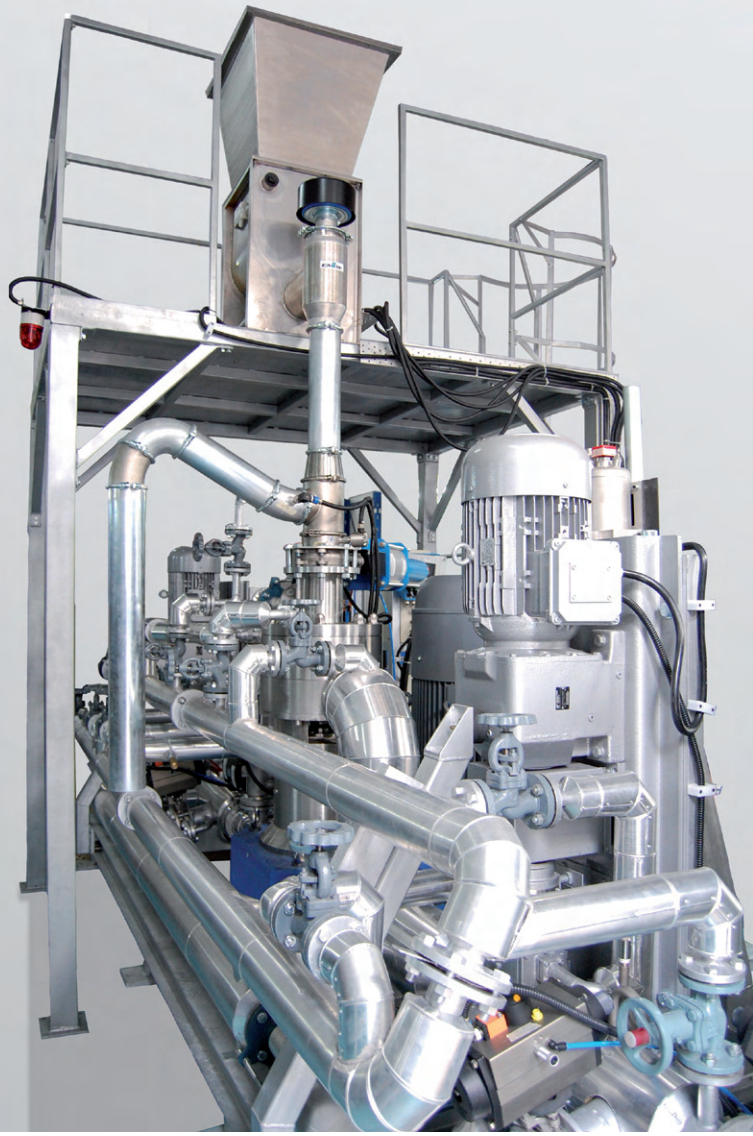
Polymer modified bituminous materials can bring real benefits to highway maintenance/construction, in terms of better and longer lasting roads, and savings in total road life costing.

The term polymer basically means a combination of a large number of similar smaller molecules or "monomers" into large molecules or "polymers". The main polymers used to modify bitumen are:
- Natural Rubber
- Styrene-Butadiene-Styrene (SBS)
- Ethylene-Vinyl Acetate (EVA)

Manufacture PMB up to 65% faster than Conventional Technology

Advantages of using PMB

The cohesion and adhesion to mineral aggregates is higher. The range of plasticity (temperature range between breaking point and the fusion point) is increased. There is greater elastic recovery after relief and higher fatigue resistance. Apart from road construction other uses of PMB are production of high quality roofing-cardboard and damp-proof layers.



Conventional PMB Manufacturing Technology

This is a batch process involving large footprint for the manufacturing facilities. The polymer is introduced separately into a CSTR containing hot bitumen with mild stirring. Dispersion is slow and less effective. There is little flexibility and longer production times are required. The batch processes poses bottlenecks when production increase is considered.

Modern IKA® Inline Technology

This is a continuous process with continuous dosing and incorporation of polymers (SBS/EVA) and bitumen into the inline IKA® Dispax Reactor DR 2000 PB. Because of intensive mixing at high shear finest dispersion is achieved in a single pass. Homogenized finished product is directly and continuously transferred to storage. The process provides for a lot of flexibility and production time is reduced by more than 60 percent.