



CASE STUDIES



PHARMACEUTICALS

In-feed water quality -

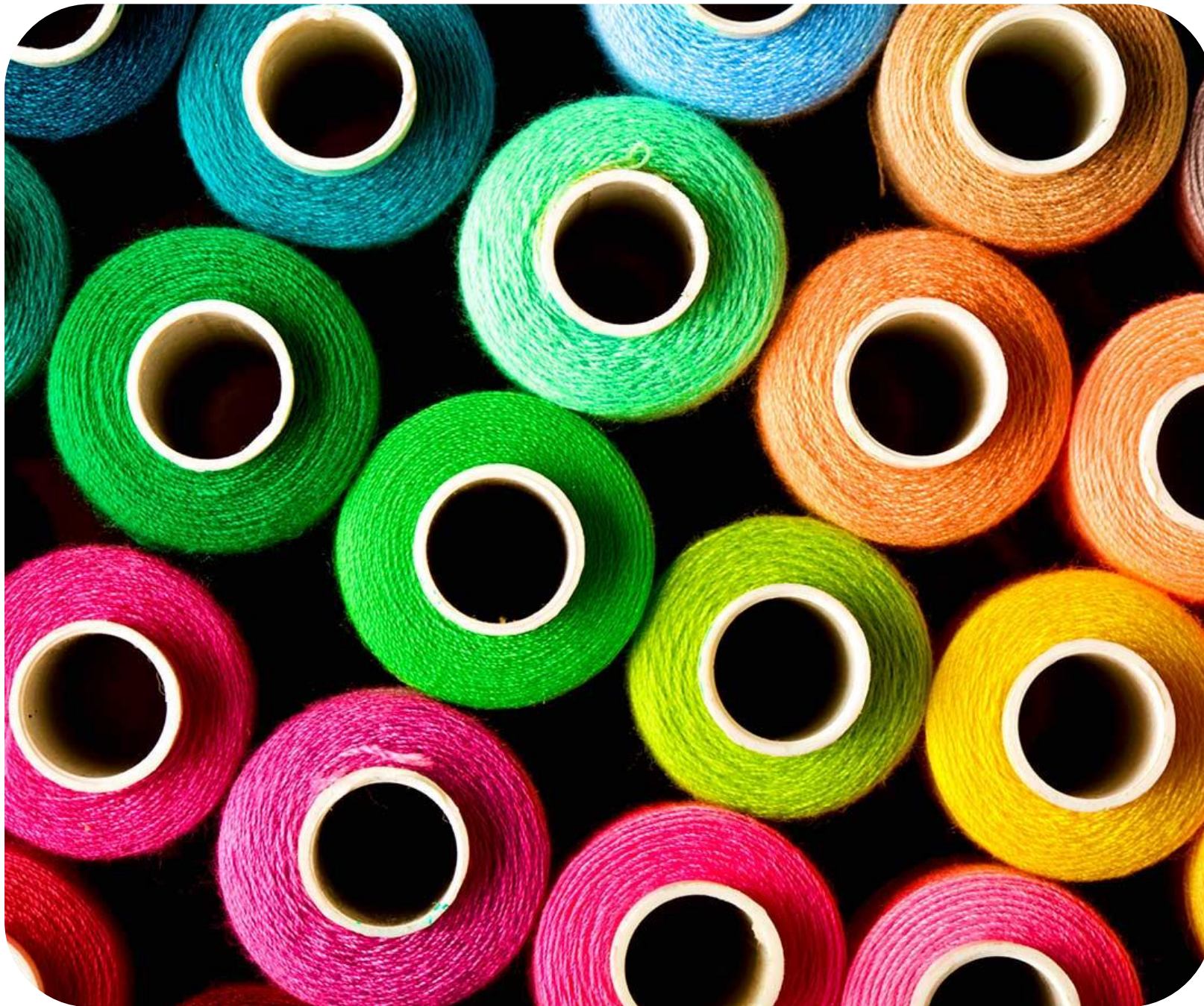
TDS :1300ppm, Flow : 6 m³/hr.

Peculiar issue faced by customer :-

Presence of Pseudomonas & pathogens in feed water to the pure water generation system.

Solution -

Ozone System & oxidizing chemicals & Heating were used; followed by UF, 2 pass HSRO-EDI. Selective levels of Residual presence of oxidizing chemicals was maintained at selective stages. Heat sanitization of Generation - Storage - Distribution systems. Localized Steam sanitization of valves & fittings



TEXTILE

In-feed water quality -

TDS: 3000ppm, Flow : 800KLD

Peculiar issue faced by customer :-

- Extreme levels of TSS, Turbidity, Hardness & Silica
- causing severe scaling of cooling lines & heat exchangers; and
- Frequent downtime of waste water recovery system

Solution -

The solution was to treat the blow down water with lime softening & precipitation by inclined plate clarifiers, which drastically reduced total hardness & silica levels, followed by filtration & resin softening + ultrafiltration & membrane separation by RO; which then provided consistent recovery upto 90%.The recycled RO water was then fed to the cooling towers instead of soft water, which eliminated scaling of cooling lines & heat exchangers on 1 side & eliminated regeneration waste from Softeners.



METAL FINISHING

Required process water quality –

Near zero ppm, microbial free, turbidity free, 200KLD

Peculiar issue faced by customer :-

Finished product was rejected due to micro specs present on the surface.

Solution –

An ultrafiltration system was installed after the final product water tank and just before in-feed to the process. The above mentioned contaminants were removed, resulting in consistent speck-less plating & finished products.

Water Conservation :

To meet the demand of 200 KLD for process, we provided recovery systems which yielded about 180 KLD, and just 20 KLD was fresh in-feed water.