Elessent™
MECS® TECHNOLOGIES

BRINK® MIST ELIMINATORS EXTRA PERFORMANCE (XP™)

FIBER BEDS FOR SULFURIC ACID PLANTS

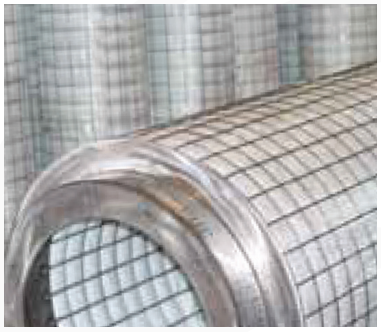
SAVE MONEY WITH ONE-THIRD FEWER ELEMENTS. SAVE ENERGY WITH ONE-THIRD LESS PRESSURE DROP.

Following a decade of research and over five years of acid plant experience, MECS, Inc. (MECS) now designs and builds the eXtra Performance (XP™) technology for all acid towers. The XP™ technology offers the lowest pressure drop available in one-to-one matchups when compared to other elements. The pressure drop per XP™ element is one-third less than a typical element of the same size and efficiency.

As a result, a sulfuric acid plant may use up to one-third fewer filter elements at the same Delta P, and fewer filter elements lower life-cycle maintenance costs. New installations can benefit from lower initial capital cost due to smaller vessel size and footprint. New installations may also benefit from using standard design vessel sizes with element blankoffs for future expansion capability.

FEATURES AND BENEFITS:

- Unique fiber bed design results in the lowest pressure drop available
- Guaranteed 99% acid mist removal at design inlet loading for most applications
- Significant inlet mist overload capacity for inlet excursions up to 3X, while maintaining low emissions requirements
- Repackable by MECS with no degradation in performance
- A proven technology using:
  - More than 65 years of experience
  - R&D in fiber bed filter elements
  - Over 15 years in sulfuric acid towers with stunning success
- Standard element on all new MECS® sulfuric acid plant designs



XP™ = 1/3 LESS ΔP OR XP™ = 1/3 FEWER ELEMENTS

EXTRA PERFORMANCE (XP™) CLOSE-UP

Elessent Clean Technologies
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EXTRA PERFORMANCE (XP™) TECHNOLOGY FOR ENERGY EFFICIENCY

New plant/tower replacement

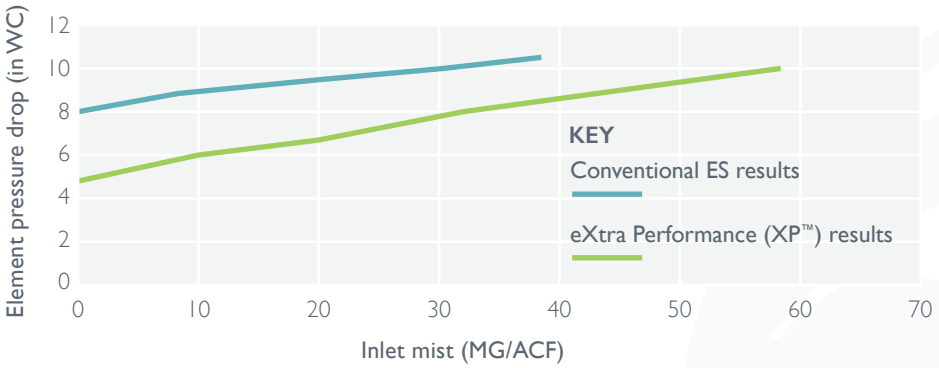
Annual cost increases for purchased electric power are becoming commonplace. Where new plant construction or tower replacement is necessary or being considered, another design approach should be evaluated. To minimize the effects of escalating energy costs, consider a design where the towers are full-sized, with a full complement of eXtra Performance (XP™) elements. This design approach will reduce the overall plant pressure drop and the energy required to drive the main compressor. Depending upon the local cost per kilowatt hour of electricity and availability of energy conservation tax credits, payback may be as low as 0.5 years.

Existing elements replacement

In addition to new construction and revamps, replacing existing elements with XP™ technology also results in significant power savings. The resulting power savings allows for the incremental price difference of XP™ elements to be recaptured quickly.

BRINK® XP™ ELEMENTS SIGNIFICANTLY OUTPERFORMED ES

ELEMENT PRESSURE DROP VS. MIST LOADING



EXTRA PERFORMANCE (XP™) FOR COST REDUCTION

CAPITAL COST ECONOMIC ANALYSIS – FEWER ELEMENTS AND SMALLER TOWER

Example	Conventional ES no. of elements	eXtra Performance (XP™) no. of elements	Reduced diameter vessel size
1	40	27	19.6' to 16.3' (6.0 M to 5.0 M)
2	90	63	28.7' to 23.4' (8.7 M to 7.1 M)
3	95	67	28.7' to 24.3' (8.7 M to 7.4 M)

NOTE: Other economic analyses using additional variables are available.

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