

Custom Engineered for your Separation and Emission Control Needs

olutions

Very short intro to Kimre[®] technology and Kimre Part One: the basics.

Step one: Fiber collection

Step two: The remarkable structure, the Media

Step three: Features of the Media

Part Two: Kimre, Inc.

One: Started 1973 by me

Two: Family owned and controlled by me

Three: Professional management team led by Mary Keenan

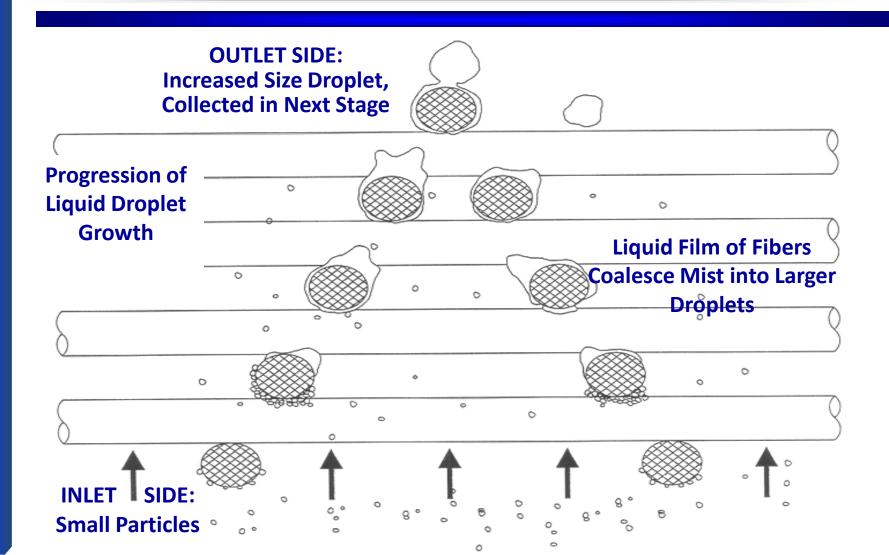
Four: World wide focus since inception

Five: Focus on specific markets; Fertilizers, Chrome, Sulfuric Acid

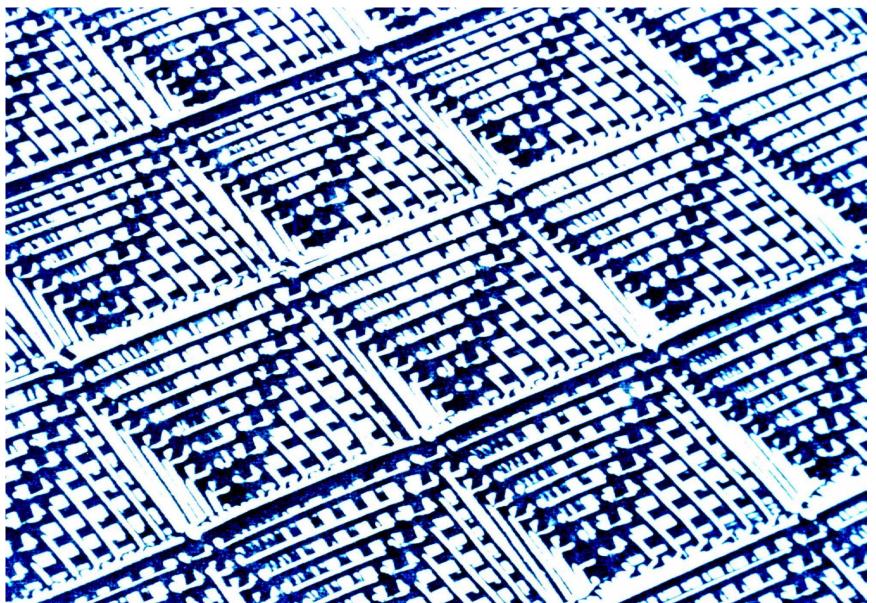
Six: Profitable and growing. Selected for 2 large USA Urea Plants Seven: NO focus on Power!



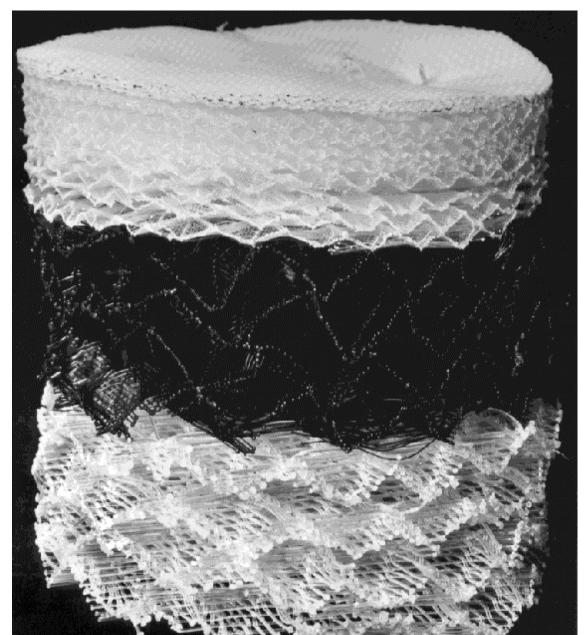
Kimre[™] Technology Flooding Model



The structure



50 to 1000 micron diameter fibers



Features and Benefits of the Structure

<u>PART 1</u>



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Secondary Features:	KIMRE TM KON-TANE [®] & B-GON [®] Media Benefits to You:			
Customized Design: Smallest Filament Diameters	Ability to Custom Design for a Variety of: Droplet Removal Efficiencies and Pressure Drops, <u>Best Collection Efficiency at Small Diameters</u> Best Pluggage			
Largest Filament Diameters	Resistance Highest Flow Capacity (When Combined with High Void Fraction), Highest Filament Resiliency and Strength.			
Composite Construction	Provides the Best Customizable Capacity Designs for: Dust Loading, Liquid Loading, Particle Size & Pressure Drop. Provides for a Wide Range of Conditions: Multiple Functions in One Composite Pad. Composite Pad is Used to Complement other Technologies.			
90+% of Fibers are Perpendicular to the Gas Flow	Highest Removal Efficiency Per Pressure Drop, Highest Removal Efficiency Per Length of Fiber Lowest Potential for Pluggage			
Self Supporting and Resilient	Supports higher mechanical Loads than ANY Other Mesh NO Need for Support Rods thru the Media which Causes Bypassing. Cleanable and Re- usable			
Extraordinary Strength	High Fiber Tensile Strength Provides the Ability for Large Pads to Withstand Higher Degrees of Loadings and Stress.			
Built-in Drain Points Best Design Program	Accommodates Large Liquid Loadings and Higher Velocities. Accurate Prediction of Efficiency, Flow Capacity & Pressure Drop			
Flexibility	Provides Easer Installation and Maintenance. Problems and Repairs are Readily Remedied by use of Edge Wrapping Media (Quick and Economical Repairs).			
	Customized Design: Smallest Filament Diameters Largest Filament Diameters Composite Construction 90+% of Fibers are Perpendicular to the Gas Flow Self Supporting and Resilient Extraordinary Strength Built-in Drain Points Best Design Program			

Features and Benefits of the Structure

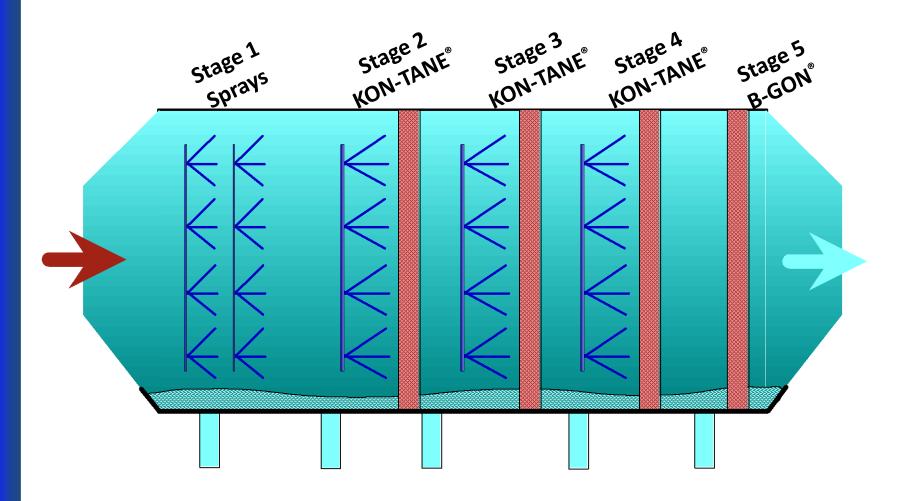
<u>Part 2</u>



PHASE SEPARATION TECHNOLOGY	r		
Primary Features:	Secondary Features:	KIMRE [™] KON-TANE [®] & B-GON [®] Media Benefits to You:	
Integral, Uniform 3-D Structure:	Withstands Mechanical Damage	Retains Shape and Thickness Can Handle High Pressure Washing. Cleanable by Crushing Media to Remove Scale.	
Integral, Uniform 3-D Structure:	Non-Isotropic Flow Properties: Flow Resistance Inside the Media is Lower than the Flow Resistance Through the Media	Gas Flow Spreads-out within the Media which Evens the Flow Across the Media, Providing Flow Stability, Complementing other Products such as Chevrons, Making for Excellent Operation for Carbon Bed Supports, as well in Cyclone Separators.	
Integral, Uniform 3-D Structure:	Wide Variety of Void Fractions: 60 to 97%	Provides for a Wide Range of Liquid Loadings. Allows use in "Plugging" services, and in High Load Bearing	
Large & Wide Pieces:	Fewer Component Pieces.	Fewer Seams are Needed virtually Eliminating the Possibility of Bypass. Makes for Faster Installation. Provides the Capability for a Variety of Shapes, including "Candles".	
Large & Wide Pieces:	One-Piece Construction	Interleaving Allows the Construction of Huge Single Piece Pads. Allows the "In-Place" Construction of Seamless Pads in Large	
Materials of Construction:	Selected for the Process	Enables a Wide Range of Chemical & Temperature Resistance	
Hot Wire Edge Cutting:	Very Accurate To Size" Cuts	Provides the Best Fit and the Lowest Risk of By-Passing	
Hot Wire Edge Cutting:	Cut Edges are Always Denser than the Body of the Pad	Provides Less Risk for By-Passing. Reduces the Risk for Localized Flooding.	
Proprietary Thermal Stabilization:	Media is Stabilized	Provides the Best Heat Stability of any Non-metallic Mesh Pad.	
Stage-wise Particle Separation:	Composite Pad Construction	Provides the Composite Pad with a High Resistance to Pluggage. The "As-Installed" Pressure Drop Stays Consistently Lower, in Comparison to Others.	
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SXF[™] Semi-Cross-Flow Scrubber Once-Through Water



SXF®					
SEMI-CROSS-FLOW INSTALLATIO	ONS				
Over 10,000 Cubic Meters per Hour Flow					
User Company	Location	Installation/Application	TAI	SI Capacity m3/h	Start Date
Abonos Colombianos S.A.	Colombia	Liquid CAN	17998	80000	07/09
Agrium	USA	Phosphoric Acid Fume Scrubber	11533	204000	1/00
ArcelorMittal Steel	USA	Oil Mist Collector	17280	340000	9/07
BACT Process Systems, Inc.	USA	SO2 Scrubber	14843	191250	12/.02
BP Chemicals. Inc.	USA	NH3 Scrubbing	006994	158100	3/98
BP Chemicals. Inc.	USA	Urea Prilling	10252	595000	3/98
Bunge Fertilizantes S.A.	Brazil	NPK Scrubber	14687	161500	1989
Desert Power LP	USA	Cooling Coils	16526	445225	3/06
Dong Myung Chem Plant Co., LTD	South Korea	Scrub F.Nh3.dust	002183	352400	4/92
DongBu Hannong Chemical Co.	South Korea	Phosphate NPK	004142	135000	2/97
Goodrich Corporation	USA	Cooling Tower Drift Eliminator	17351	100130	10/07
Gulf Fluor	UAE	Fluorides Absorption Scrubber	18434	5500	01/11
IFFCO	India	Phosphoric Acid Fume Scrubber	009572	223109	9/97
LG Metals Company	South Korea	Cu Melting Furnace / Sulphur	002467	100000	9/96
Menzhnava Proiect	Russia	Emergency Smoke Scrubber	006875	125000	4/96
Mosaic Fertilizers LLC	USA	Phosphate DAP	001033	99450	6/89
Mosaic Phosphates Co.	USA	MAP/DAP Granulation	11658	285600	8/01
Namhae Chemical Corp.	South Korea	Phosphoric Acid Fume Scrubber	002321	72930	6/94
Namhae Chemical Corp.	South Korea	Scrub Fluorine	002265	352400	1/97
Namhae Chemical Corp.		Urea Granulation Scrubber	11945	252331	4/00
Nissan Motor Manufacturing Co.	USA	Air Supply House	007834	129200	6/97
Nissan Motor Manufacturing Co.	USA	Paint Booth Humidifier	009989	158100	1/98
Northern Air Systems	USA	Cooling Coils	14928	151300	2/03
Ravensthorpe Nickel Proiect	Australia	Sulfuric Acid Scrubber	15734	100000	9/04
Saudi Arabian Mining Company / MA'ADEN		Tail Gas Scrubber	15946	150000	TBD
Saudi Arabian Mining Company / MA'ADEN		Tail Gas Scrubber	16765	150000	TBD
Saudi Arabian Mining Company / MA'ADEN		Tail Gas Scrubber	16766	150000	TBD
Techno Polvmer Co. Ltd.	Japan	Filter Protection (Acrvlic Resins)	003771	206375	2/97
Unknown		Wet Scrubber - Aluminum/Sulfuric	18884	17850	
Vallev Nitrogen Producers	US	Urea Prill Tower	10154	510000	2/91
Voith Paper GmbH & Co. KG	Germany	Paper Washing Exhaust.	15246	145000	8/03
Wesfarmers CSBP Limited	Australia	Phosphate SSP	002167	104040	4/88



SXF[™] Gas Scrubbing In service for 30 years





Kimre[™] Technology Aerosol Separation

AEROSEP[®] Multi Stage Aerosol Separation System:

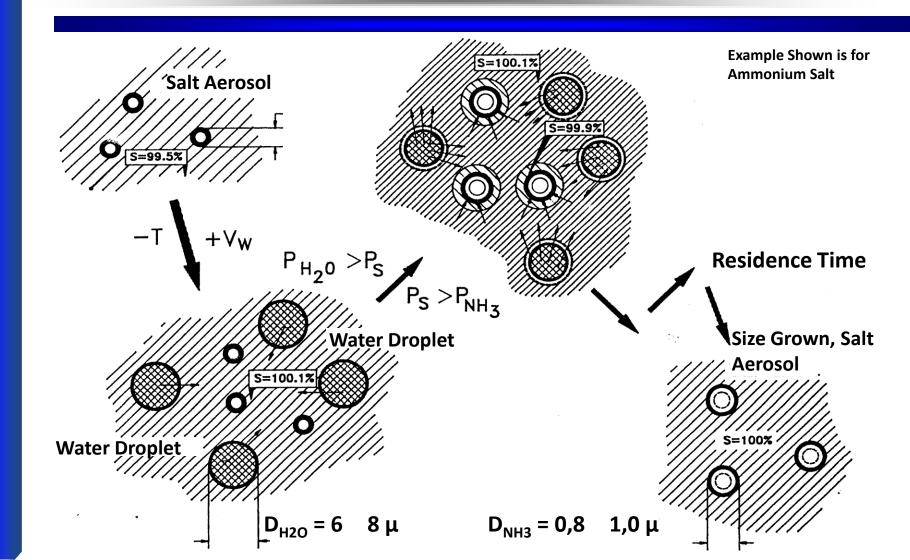
🔆 Sub-Micron Aerosol & Particulate Scrubbing.

Custom Engineered for Each Application.

Safe, Easy On-Line Maintenance.

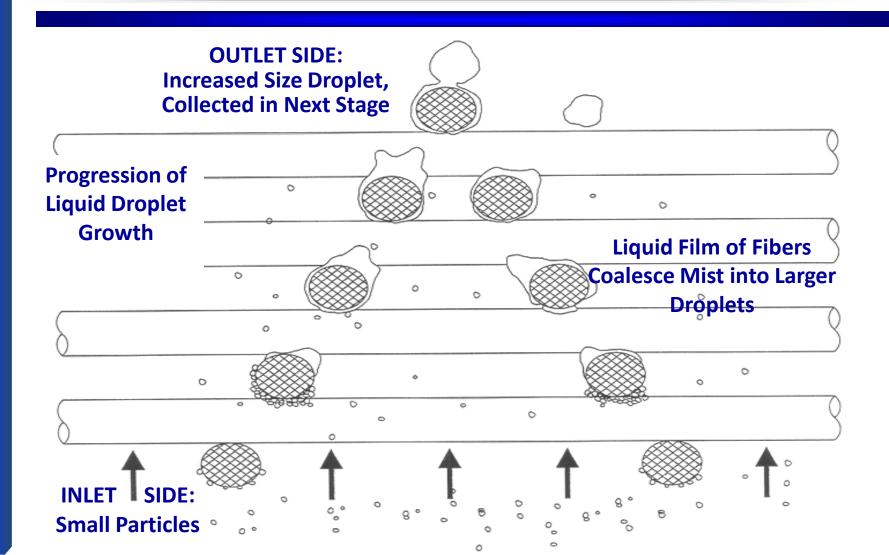


Condensation Model for AEROSEP[®] Growth





Kimre[™] Technology Flooding Model





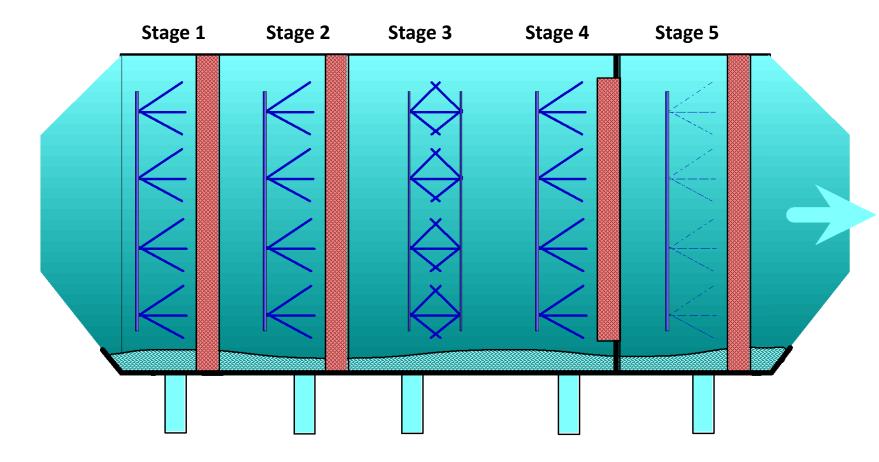
AEROSEP® Systems



Multi-Stage AEROSEP with Externally Accessible Media.

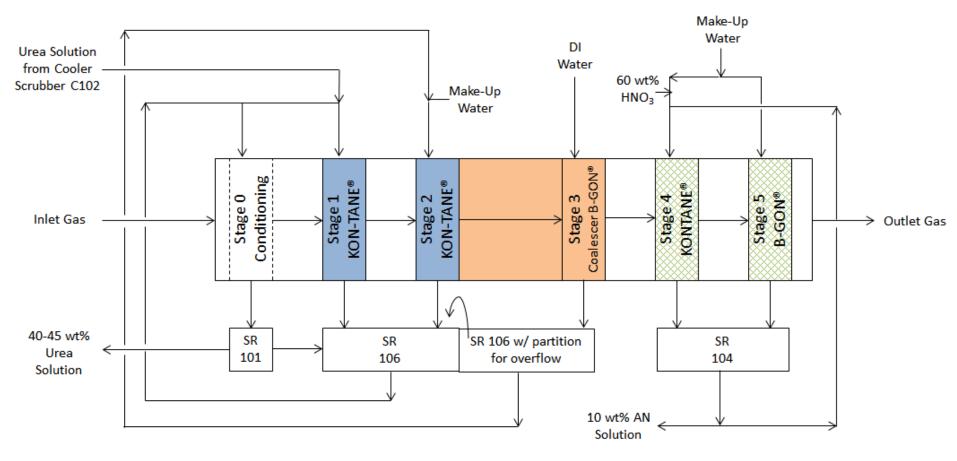


AEROSEP[®] System KON-TANE[™] Media



Breaking news: KIMRE[™] SXF[™] SEMI-CROSS-FLOW FOR PARTICUATE, AEROSEP[®], AND AMMONIA

SELECTED FOR FIRST 2 NEW USA GRASS ROOTS UREA PLANTS IN 25 YEARS 1,165,000 NM³TOTAL FLOW SYSTEM FLOW



Granulator / Ammonia Scrubber C101A/B



Dust Collection Stages

AEROSEP[®] Stage

Ammonia Absorption Stages

Objective for Power plants

- Apply the SXF[™] Direct collection mechanisms for particulates to ~ 0.9 microns
- Apply the SXF[™] and AEROSEP[®] technologies for particulates below ~ 1 micron

In collaboration with partner

to become world standard for collection of fine particulates from power plants.













