



Technology

MATTERS™

CCI ECCS strainer

ACRS Meeting, August 24, 2006

Resolution of GSI 191

Presented by:

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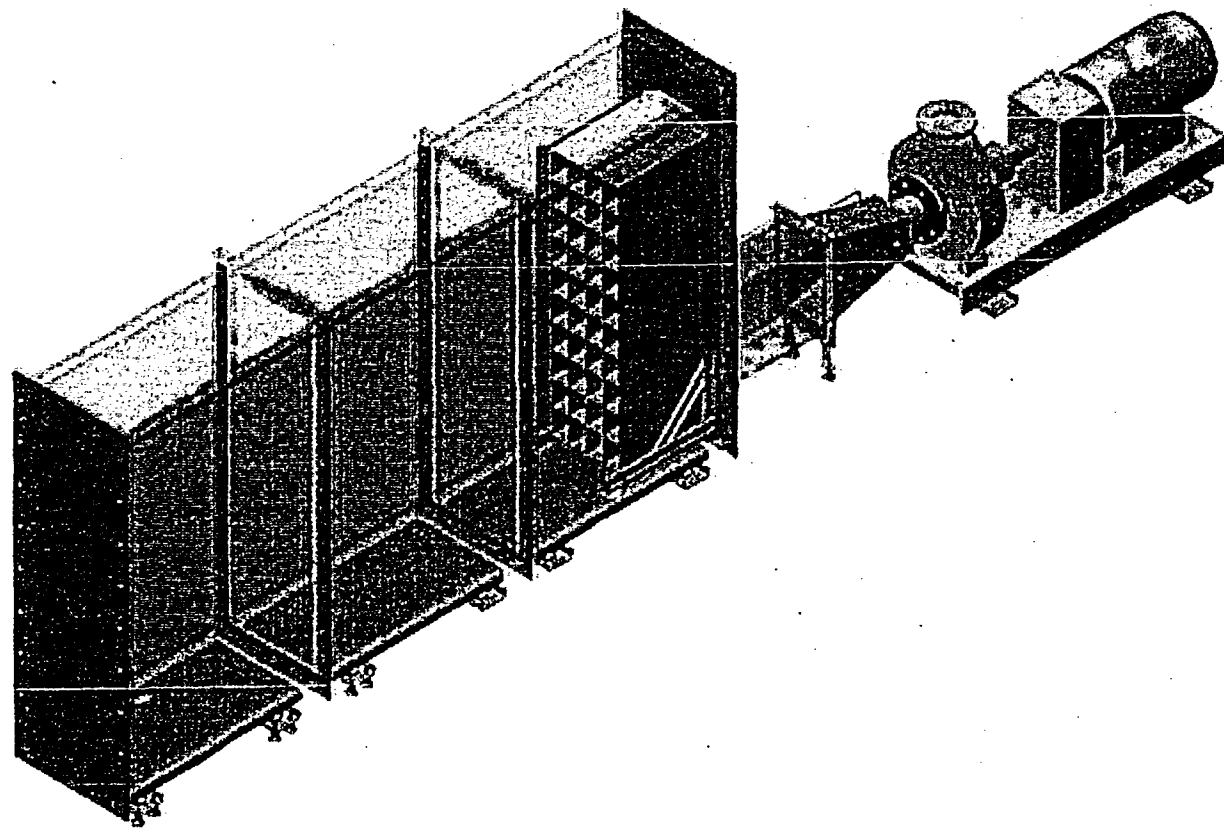
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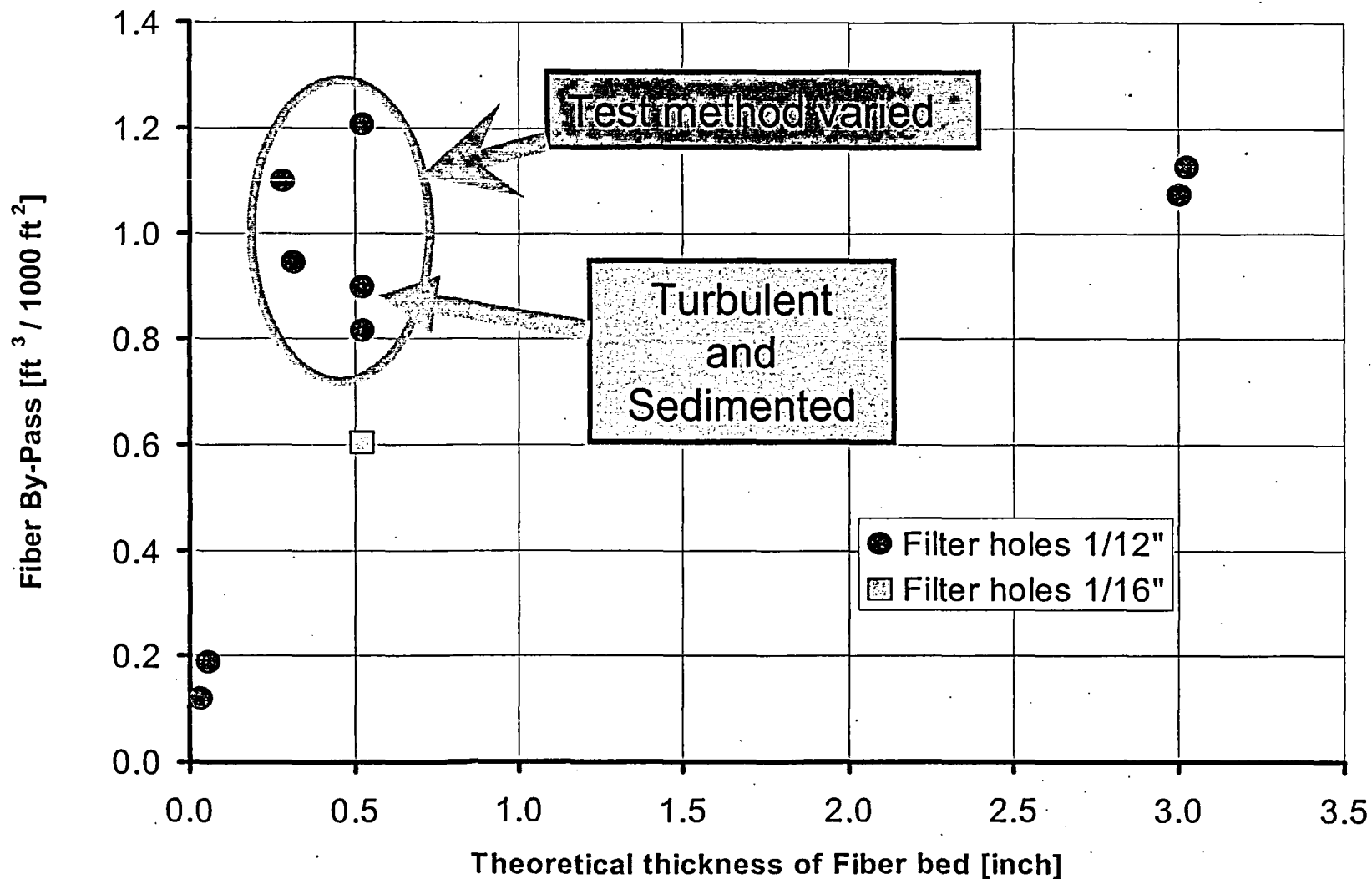
Screen By-Pass Test





Fiber By-Pass Test Results

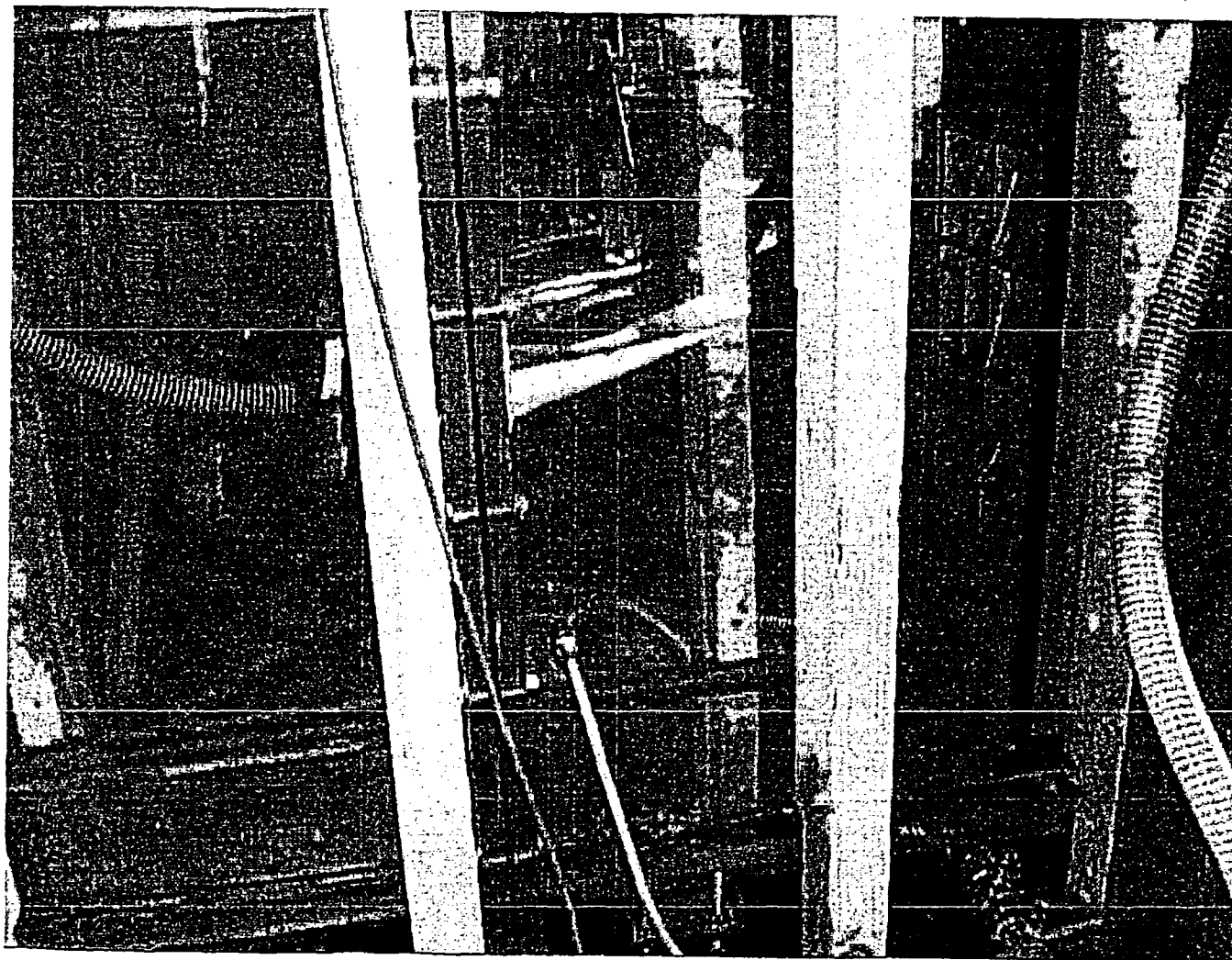
Fiber By-Pass related to 1'000 ft² filter area
Approach velocity 0,00393 ft /s





Screen Bypass Test

Hand stirred



Screen Bypass Test With sedimentation





Fiber By-Pass Size analysis

	fiber size	amount of fiber
class 1	0.1 to 0.5 mm	63.1 %
class 2	0.5 to 1.0 mm	27.3 %
class 3	1.0 to 2.0 mm	8.2 %
class 4	> 2.0 mm	1.4 %

Test done with screen
hole size of 1/12"
(2,1mm)

Table 2: Bypass Test Data

Conclusion:

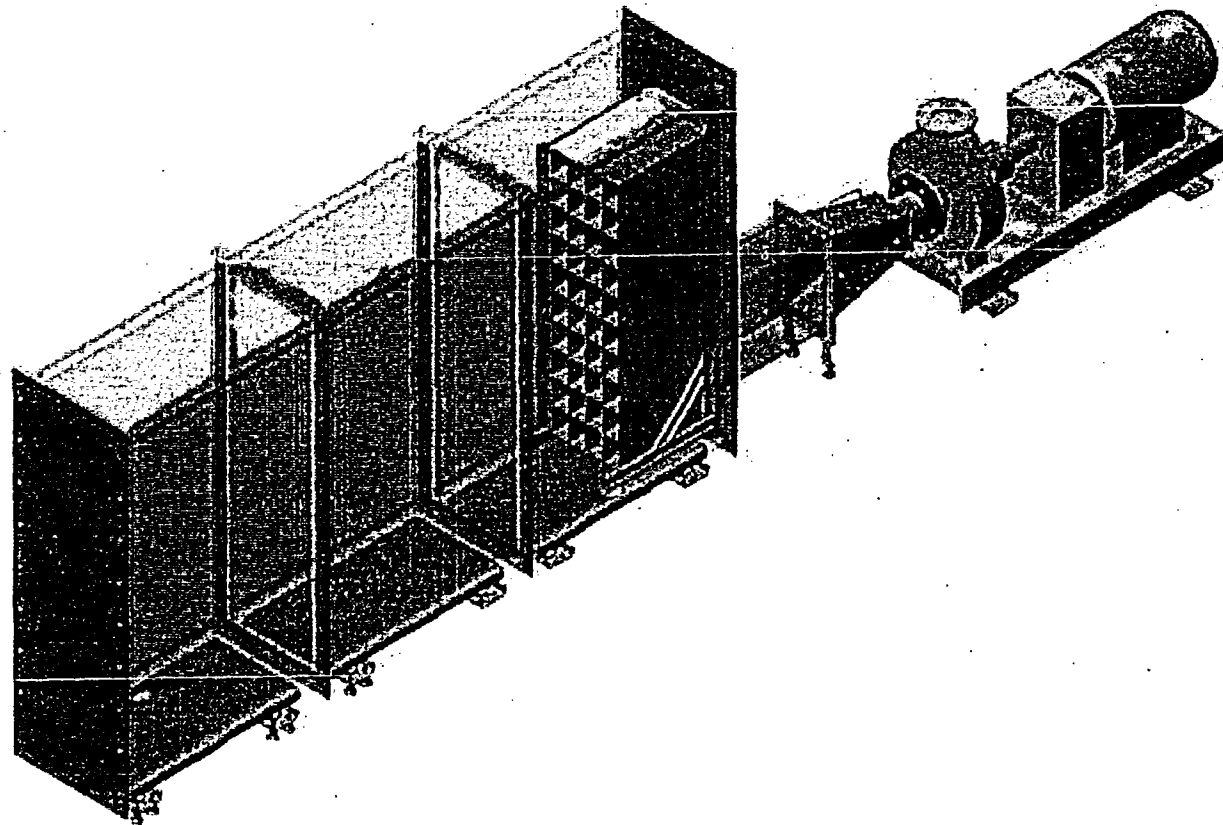
The measured length of the fiber By-Pass is for about 2/3 smaller than 0,02" (0,5mm) and for 90% smaller than 0,04" (1mm)



Results and Conclusions of By-Pass Testing

- Above approx. 0,25" equivalent fiber bed thickness the By-Pass is more or less constant
- Size of perforation holes influences the By-Pass approx. linear with the hole diameter
- Test procedure influences the test result not significantly
- Reduction of screen area does not reduce By-Pass due to increased approach velocity
- Size of fiber, passing the screen is small

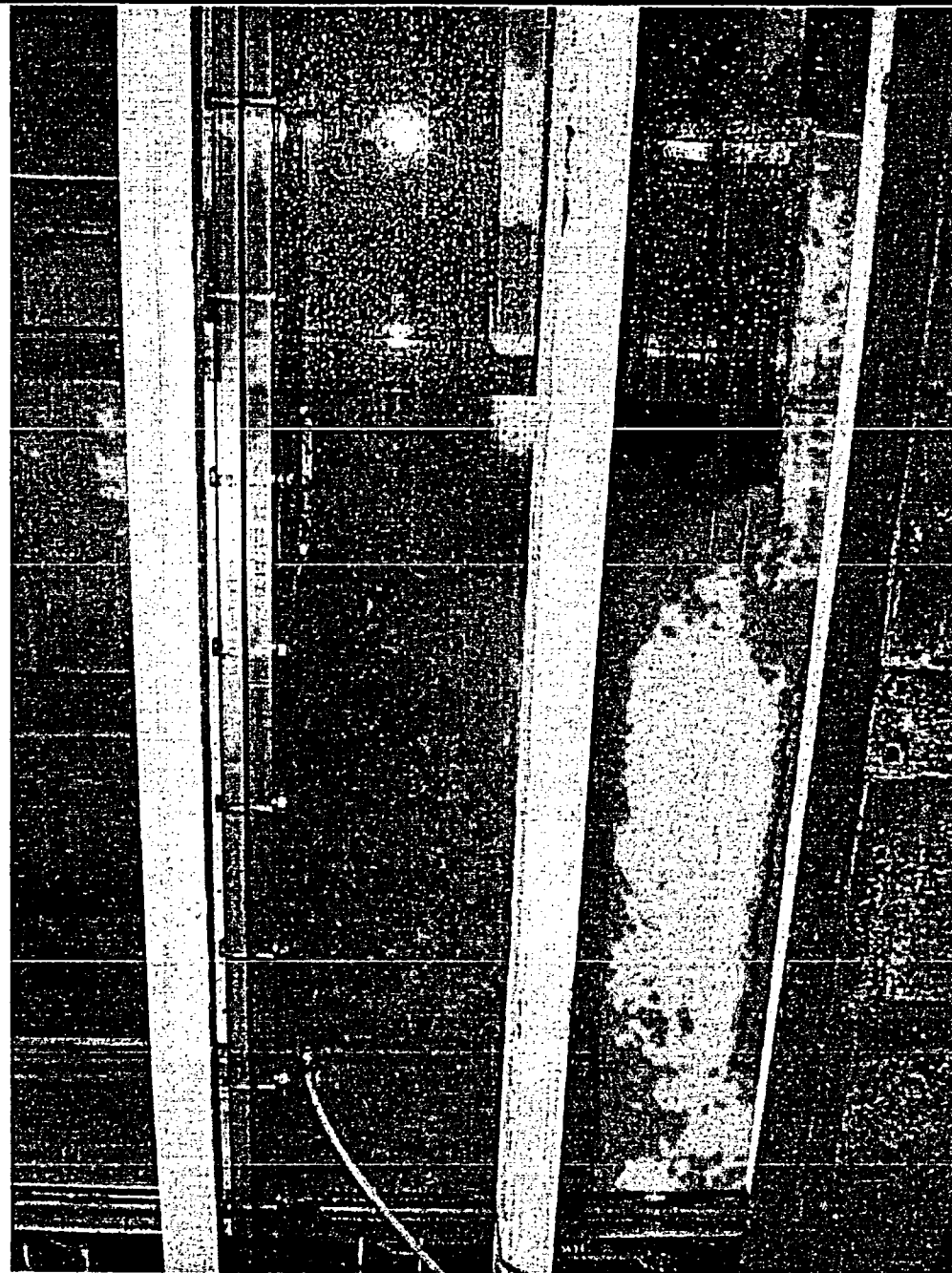
Head Loss due to Chemical Effects





Screen Bypass Test

High turbulence flow





Content

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 - ECCS strainer replacement project
 - Design features of CCI strainers
 - Test facilities
 - Strainer design parameters
 - List of licensees and related testing
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 - Debris preparation Methodology
 - Debris Introduction Methodology
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