



Bilfinger Water Technology

Vee-Wire[®] Technology in Sugar Processing

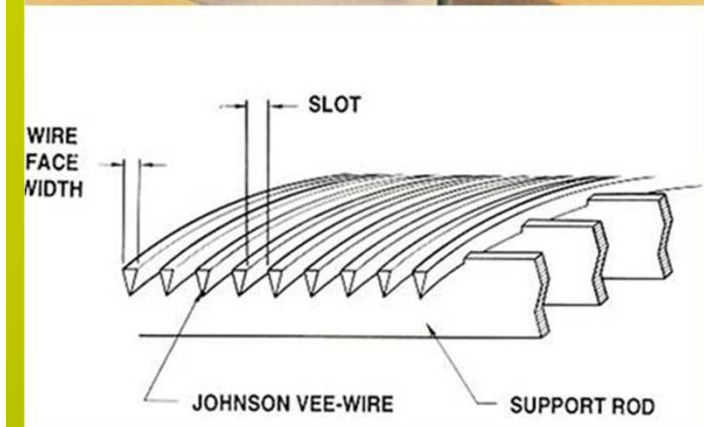
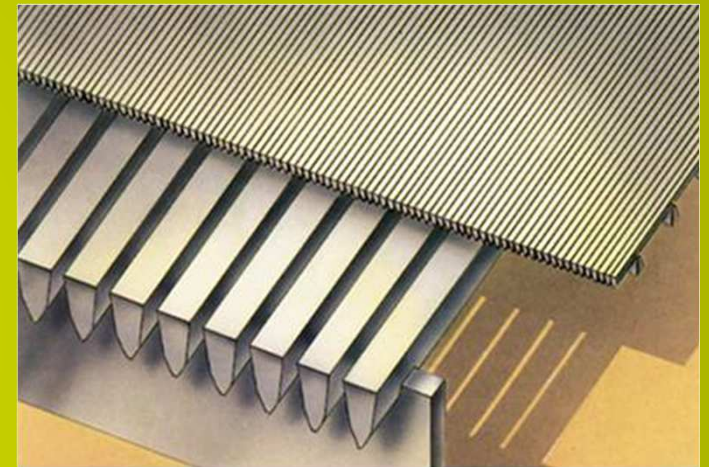
Philip Schofield

ACHEMA 2015, Frankfurt am Main | 15 -19 June 2015

Vee-Wire®

Main Features

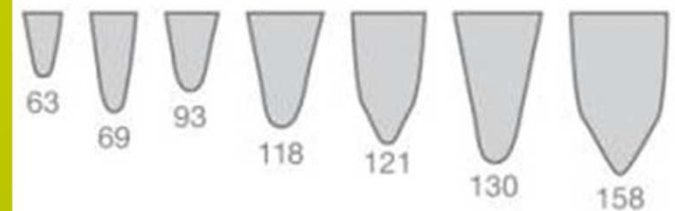
- High Open Area
- Continuous Slot Opening
- Optimized Screen Design
- Vee-Wire® Profile
- Two Point of Contact of Particles
- Smooth Surface
- Strong All-Welded Construction
- Easy Cleaning
- Quick On-Site Installation



Vee-Wire[®]

Main Features

- State of the art shaping equipment for production with tightest tolerances of +/- 5 µm
- Laser shaping verification
- Shapes smallest wire in the world with 0,38 mm for maximum open area
- Largest selection of Vee-Wire[®] sizes from 0,38 to 4,59 mm
- Made in a variety of materials for e.g. stainless steel 300 series, Duplex, Super Duplex and exotic alloys
- Smallest slot size 15 µm



Vee-Wire® Products for Sugar Processing



Die Vee Wire® Technology in Sugar Processing

Vee-Wire® Products for Sugar Processing

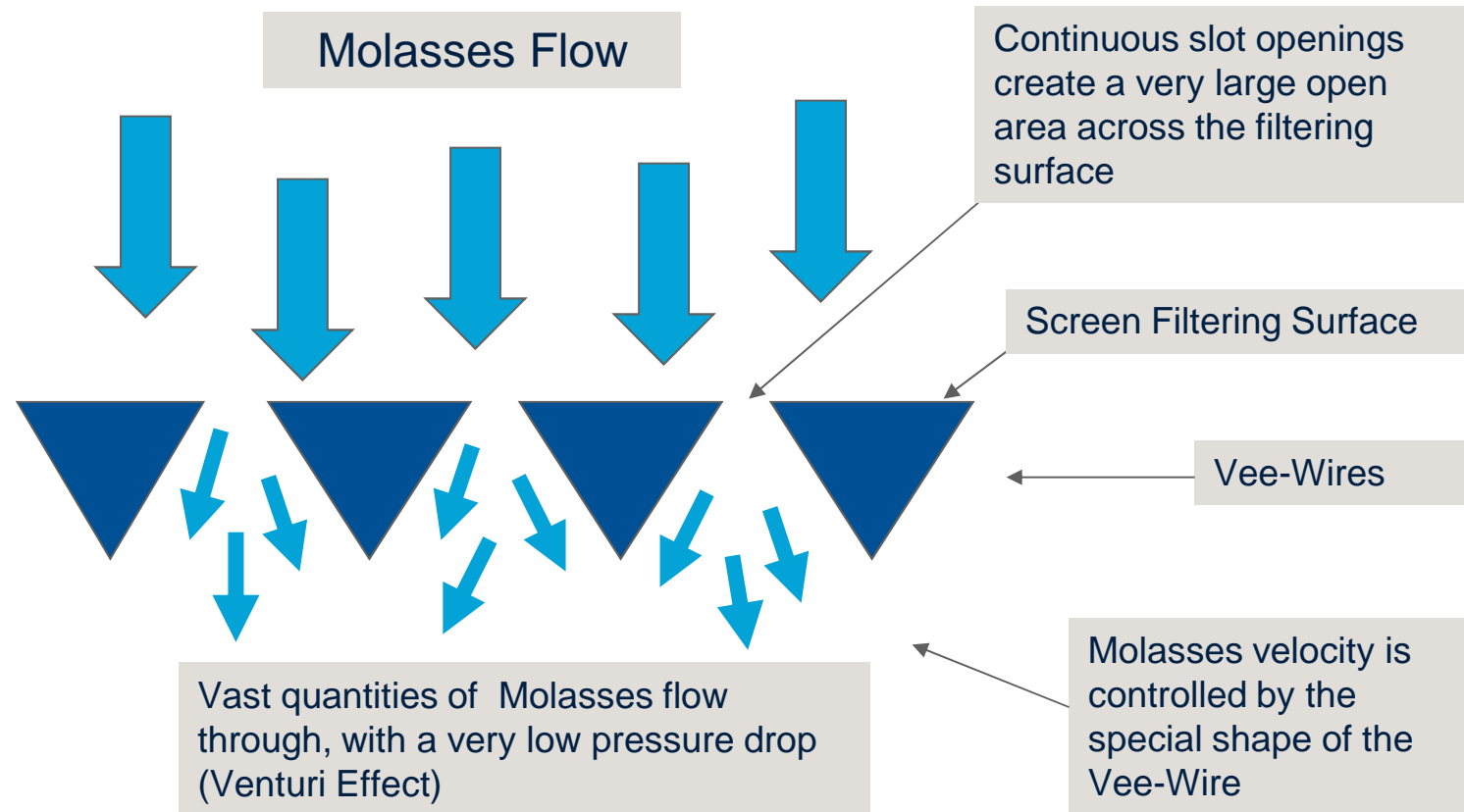
- Rotary Screen for separation of solids
- Drums with $D = 600$ to 2000 mm, $L = 800$ to $4,000$ mm
- Hydraulic Capacity from 55 to $2,700$ m³/h
- Slot opening from 0.5 to 3 mm
- Material: SS 304 or SS 316
- Cleaning system with spray nozzles inside and outside of the trommel
- Easy to operate, low automation, very reliable
- Able to handle high amounts of solids
- Fed by gravity or pumped



Vee-Wire® Products for Sugar Processing



Vee-Wire[®] Products for Sugar Processing



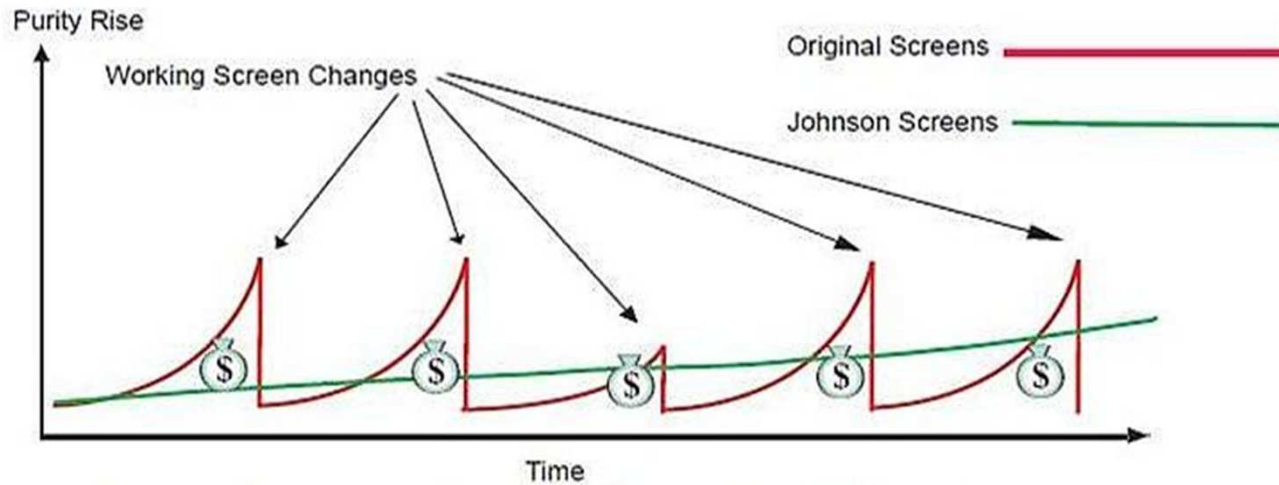
Vee-Wire® Products for Sugar Processing

- Fugal Screens for continuously working centrifuges
Available for all popular models of leading centrifuge manufacturer
- Smallest slot size 20 µm
- Optional available with variable slot size
- No support basket necessary
- Low weight with only approx. 15 kg
- No need for technical modification on the centrifuge
- Material: SS 316
- Service Life 1-3 years
- Decreasing of Molasses purity between 0,2 – 2,0 %



Vee-Wire® Products for Sugar Processing

Purity in Molasses



- Red line** = how the purity level of molasses drops after foil installation because of screen fail
- Green line** = VEE-WIRE centrifugal basket's longevity and cost savings, because of slow rising



Vee-Wire® Products for Sugar Processing



Case History | American Crystal Sugar, East Grand Forks MN

- Savings from no down time: **USD 56,000 / year / centrifuge**
 - Based on USD 500 / ton sugar
 - 2 hours down time
 - 4 changes / season

Mill capacity: 8,300 CWT

BMA 2300, capacity: 14 tons / hour

- Beet
- B-Sugar
- Molasses purity **decrease 1 point = USD 161,000 / year / centrifuge**
- Sugar color remained the same



Vee-Wire® Products for Sugar Processing

- Bayonet screens for steep dewatering
Available from 20 mm Diameter up to 970 mm
Max Length 6 m
- Candle filter for juice filtration
- Tank bottom screens for steeping corn
- Flat screens for extraction towers
- Intake screens for process water
- Rotary Fiber Separators



Vee-Wire® Products for Sugar Processing

- Vessel internals for syrup conversion
Header laterals for distribution and collection
- Nozzles for vessel collection
- Underdrain Systems for treatment water filtration in sand





Vee-Wire[®] Technology in Sugar Processing

Thank You for your attention!