

ENTRANCE VELOCITY - COST VERSUS EFFICIENCY

- (A) For the 10" diameter screen, based on 30 metre setting depth and 0.060" aperture, the following details would result for a 0.1 foot/ second entrance flow velocity.

Screen Open Area 34%

Theoretical Flow Rate 7,152 Gallons/Metre of screen/ Hour

Budget Price for 4 metre long effective screen, fitted with 2 x bevel weld rings, 1 x bottom cap, 1 x K Packer in Grade 304 SS material, including road freight to Ayr would be \$1,884.00 FOT Ayr, excluding GST.

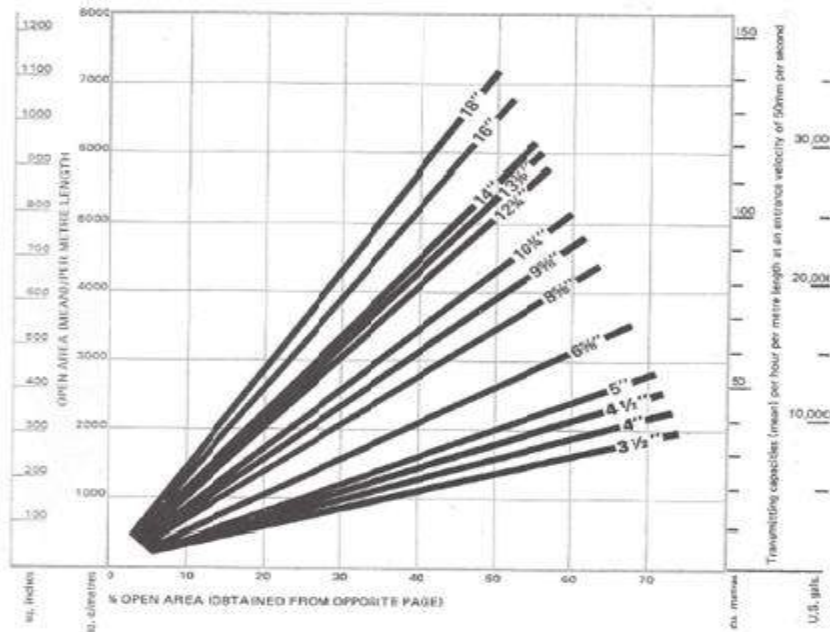
- (B) For the 6" diameter screen, based on the same criteria, the following would result.

Screen Open Area 37%

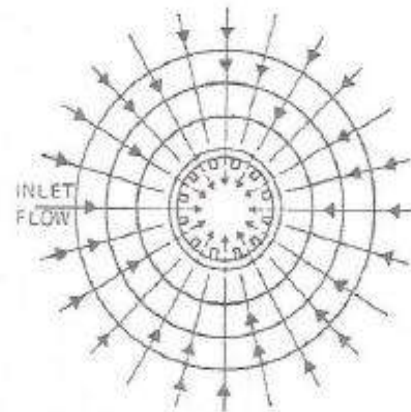
Theoretical Flow Rate 4,784 Gallons/Metre of screen/Hour

Budget Price for 4 metre long effective screen, fitted with 2 x bevel weld rings, 1 x bottom cap, 1 x K Packer in Grade 304 SS material including road freight to Ayr would be \$1,298.00 FOT Ayr, excluding GST. **\$586.00 Difference**

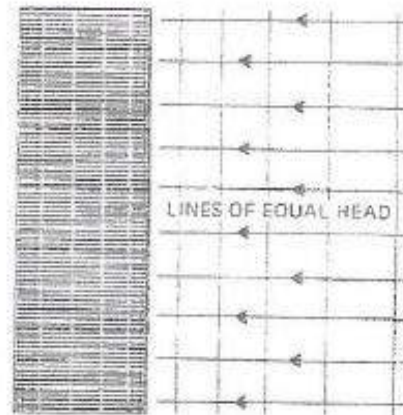
Wedge Wire % Open Area Open Area Transmitting Capacities



FLOW PATTERN OF CONTINUOUS SLOT WELDED WEDGE WIRE SCREEN



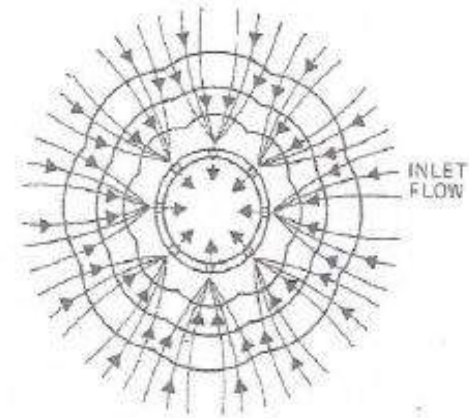
LINES OF EQUAL HEAD



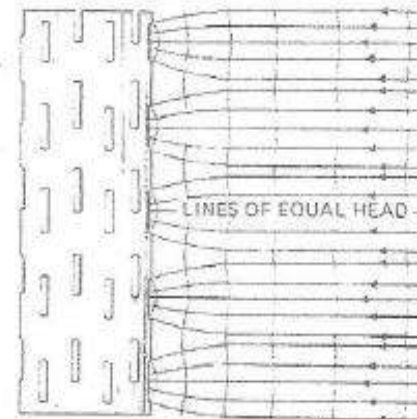
LINES OF EQUAL HEAD

CONTINUOUS SLOT WELDED WEDGE WIRE SCREEN

The diagram above shows that there are no obstructions to the flow of water entering the screen. The water does not have to alter course either horizontally or vertically to find openings — consequently an all round even flow is obtained with little or no turbulence.



LINES OF EQUAL HEAD



LINES OF EQUAL HEAD

SLOTTED OR PERFORATED CASING

Here we see the flow pattern of water entering slotted or louvred casing. The water converges on slots causing turbulence, aeration and high entrance velocity.

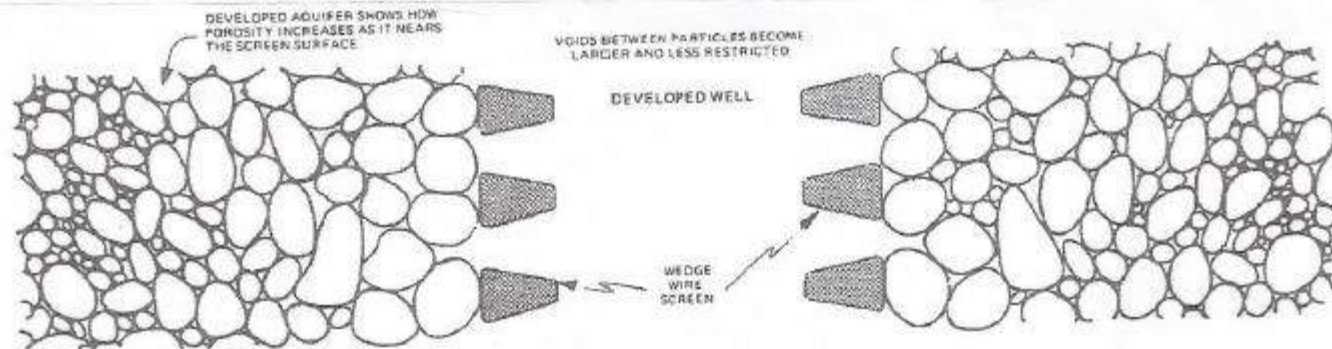
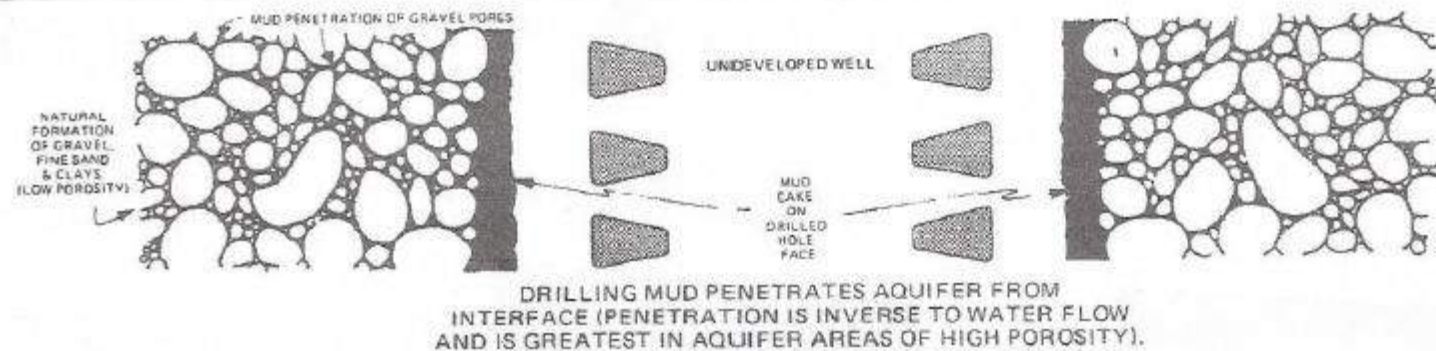


A large percentage of water wells will not deliver the amount of water required. There are four main reasons for this and they are —

1. The geological structure in which the well is situated is incapable of supplying the required volume and unfortunately, nothing can be done with this problem.
2. The construction of the well or design, has not allowed for enough open area in screening to allow a sufficient flow of water to enter the well.
3. The well, when first drilled or constructed, **had not been developed** or, could not be developed enough to allow a large enough volume of water to enter the well i.e. the surrounding geological strata is blocked with clays etc. which could not be flushed clear.
4. The screen selected for the well is either, inefficient, blocks easily, has not enough open area to allow free flow of water into the well or, it has restricted the development of the well.

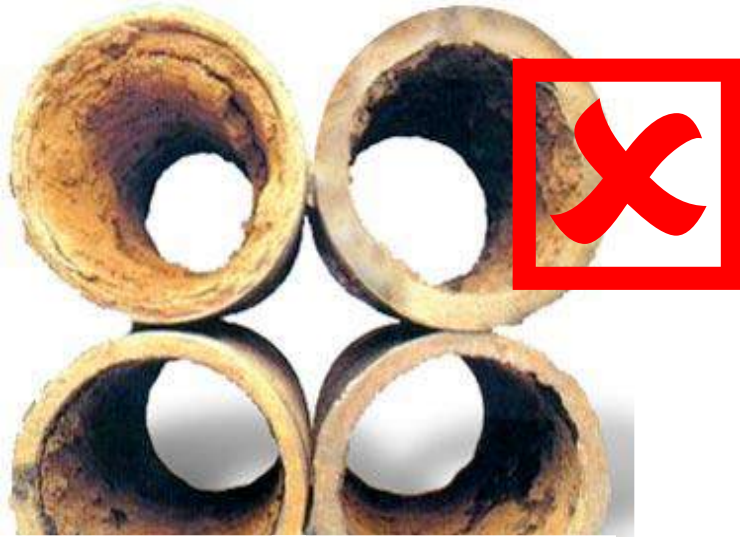
The detail below diagrammatically indicates:

- A *Aquifer contamination caused by the drilling operation.*
- B *Increased Porosity obtained by correct well development.*





No Iron Bacteria Build Up

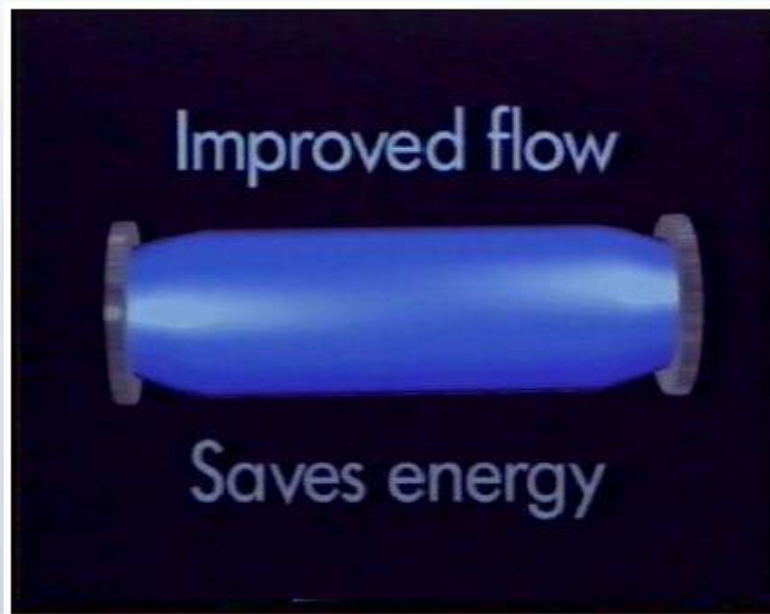
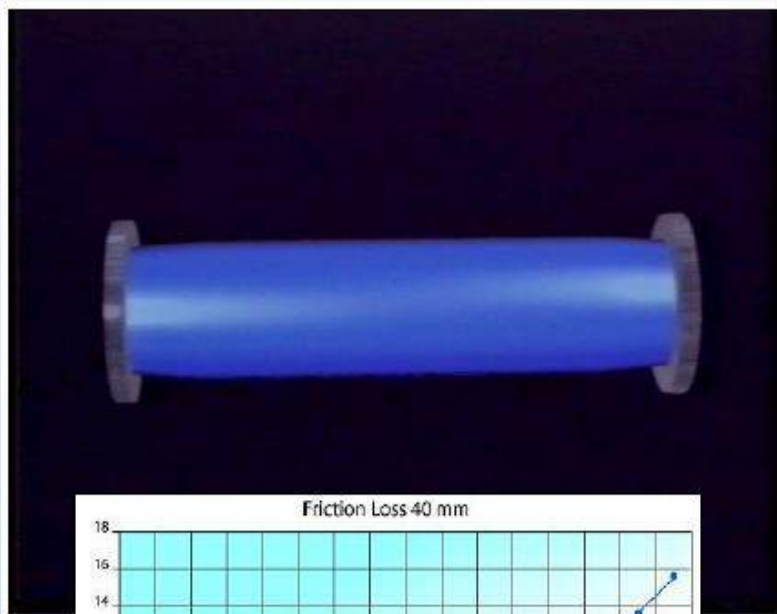


Non Corrosive





Excellent Hydraulic Performance



Swells up to 15% and low friction loss

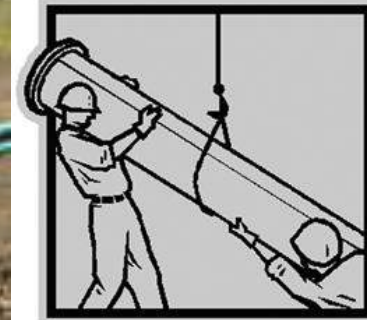
Installing Flexibore vs. Steel



Flexibore

Vs

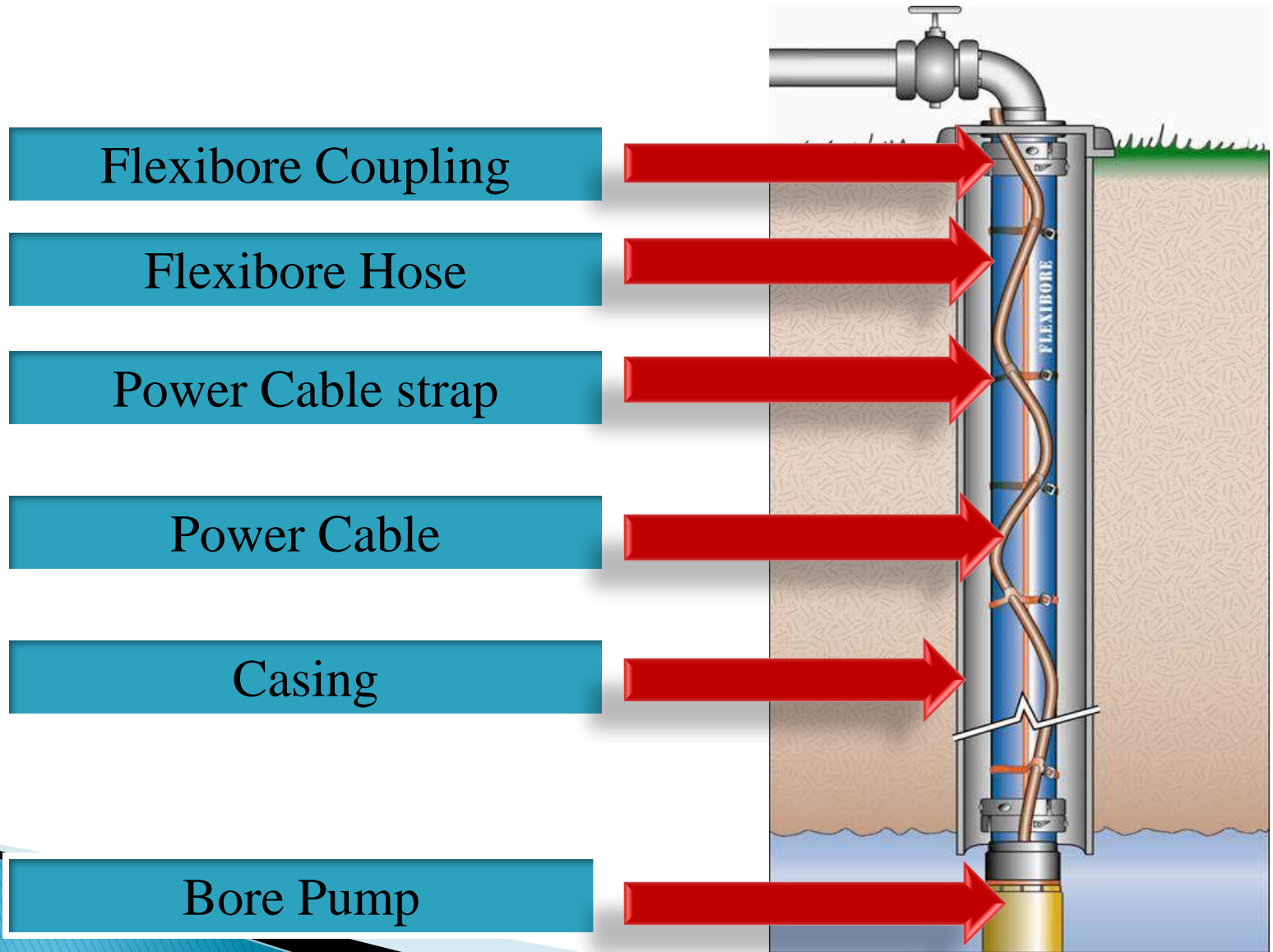
Steel



Life Cycle Cost of FLEXIBORE – Year 1

Description	Steel Riser 6" x 30m	Flexibore 6" x 30m
Riser Capital Cost	\$ 3,764	\$ 3,514
Transport to site	\$ 150	\$ 100
Handling (off truck > on truck > at site)	\$ 150	\$ 100
Safety	?	✓
Installation Cost	\$ 1,000	\$ 500
Friction Loss	×	Swell up to 15% under pressure
Electricity Efficiency	10% IRON BACTERIA BUILD UP	25% <i>Savings on power bill</i>
<u>Yearly</u> Extraction and Re-installation	(6 hrs) \$ 1,002	(2hrs) \$ 334
TOTAL	\$ 6,066	\$ 4,548
TOTAL SAVINGS	-	\$ 1,518

Typical Flexibore Installation



IN CONFIDENCE TO THE CLIENT

REPORT NO: MT-09/315-A

STRENGTH TESTING OF 102MM (4") HOSE ASSEMBLIES

CLIENT: **FRANCOIS STEVERLYNCK**
CRUSADER HOSE
22 INDUSTRY PLACE
BAYSWATER VIC 3153

DATE OF TEST: JULY 23RD 2009

DATE OF REPORT: JULY 30TH 2009

TEST SYNOPSIS:

Two 102mm (4") diameter hose assemblies complete with stainless steel, threaded end couplers were delivered to the Melbourne Testing Services laboratory for testing. The hose assemblies were identification by the client as:

- Angus Wellmaster
- Crusader Flexibore

At the request of the client the hose assemblies were to be tested to determine their ultimate strength and load capacity.

TEST PROCEDURE:

Testing was conducted by gripping the Stainless Steel threaded couplings in a tensile testing machine (See Fig.1). Tensile load was then applied at a constant rate and was continued until rupture of the hose had occurred. Load and extension data was recorded throughout the test.

TEST COMMENTS:

As can be seen from Figure 2, failure of the hose assemblies occurred by rupture of the hose fabric. This mode of failure was observed for both tests. Test data curves showing the applied tensile force and extension for each test are provided in Figure 3. The recorded failure loads for each hose are as follows:



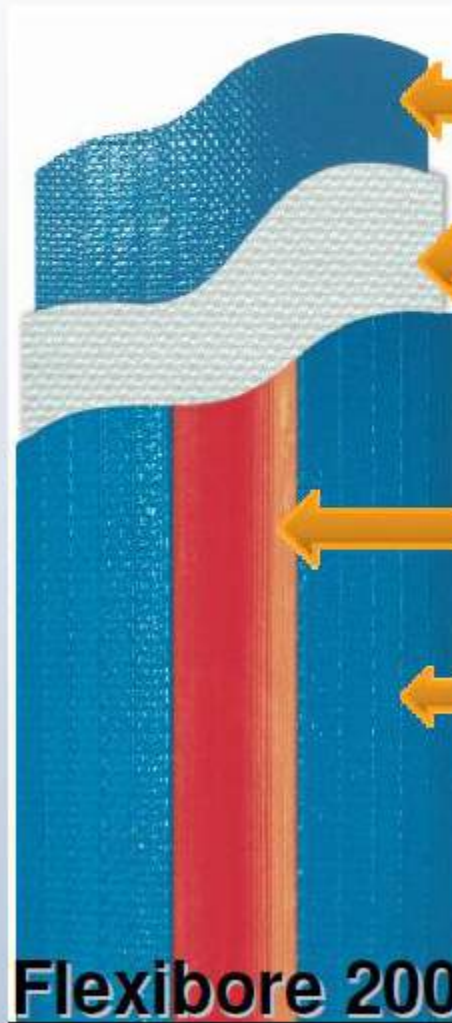
**FIG.1
TEST SET-UP**

Hose I.D.	Peak Test Force (kN)	Peak Test Load (kg)	Peak Test Force (Tonnes)	Extension at Peak Load (mm)
Angus Wellmaster	79.0	8050	8.0	51.5
Crusader Flexibore	87.8	8952	9.0	54.0



Woven on Looms

Size Range Diameter
32mm to 200mm



Impregnated polyurethane lining bonded to outer cover which eliminates separation

Woven textile fabric of high tenacity polyester

Strip with loops every meter from which to secure power cable

Tough polyurethane cover

Flexibore 200









This is the only way in that
I can see

6" Gal pipe

250mm/10" Poly Pipe

Bore Seal at Top

9 meters ground level

water level

150 mm Flexi Bore

10 meters of water

Impeller

Impeller

Suction
Photo
of Snake

15 meters
Ground level

Snake

2 meters

6 meters

