JK STRUCTURES - TECHNICAL FEATURES **THE JK STRUCTURE**	APPENDIX 1

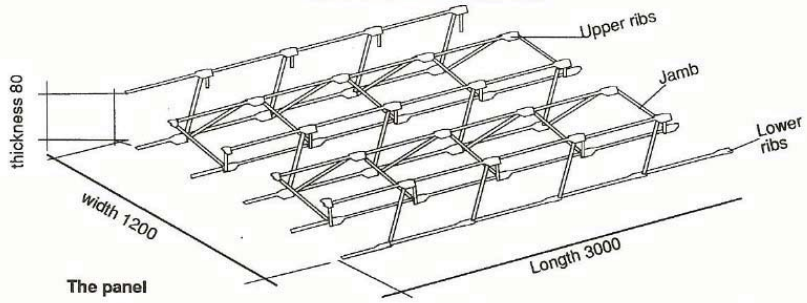
The J.K. Structure is composed of tri-dimensional panels, realized **without welding , in one piece, without any loss of material,** by special cutting process and using galvanized steel plates.

The J.K. Structure is made up of **2 sides of longitudinal ribs** which are linked together at the knots by jambs.

The layout of the jambs in relation to the ribs defines the sides :

Side with **cross-shaped knots** : jambs laid out in opposite directions
Sides with **triangular knots** : jambs laid out in the same direction.

STANDARD PANEL



The panel

The panel :

Length	: 3,00 m	Surface	: 3,60 m2
Width	: 1,20 m	Volume	: 0,29 m3
Thickness	: 0,08 m	Weight	: 12 kg

The ribs:

Width	: 5 mm	Nomber / face	: 15
Distance between ribs	: 82 mm	Total/panel	: 30

The sheet metal:

Steel	: TYPE C320 Z350 galvanized
Elastic resistance	: Re = 32 kg/mm2
Thickness	: 1,7 mm

The knots :

Distance between knots	: 125 mm	Total / side	: 375
Number / rib	: 25	Total/panel	: 750

POSSIBLE ADAPTATIONS

Panel thickness : all thicknesses from 8 to 4 cm
Bending : all bending diameters up to 1m minimum

JK STRUCTURES - TECHNICAL FEATURES

JK PANEL ASSEMBLY TECHNIQUE

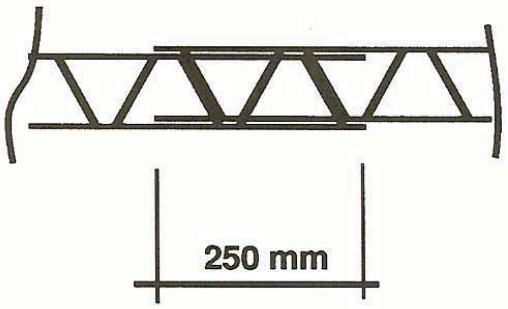
APPENDIX 3

JK panels are self-covering, laterally and longitudinally. The coverings are held in place by staples or binding wires, which results in a continuous structuring or the assembled panels.

The equipment required is a binding wire fitter and a hand stapler (BOSTITCH P7, SR8, or similar) or a pneumatic stapler (ATRO Clipper or similar), and CLIPPER 20 staples.

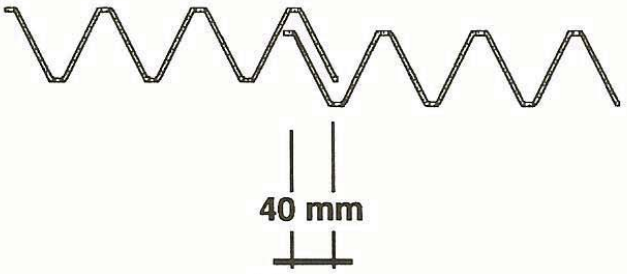
ILLUSTRATIONS OF COVERING

Longitudinal covering



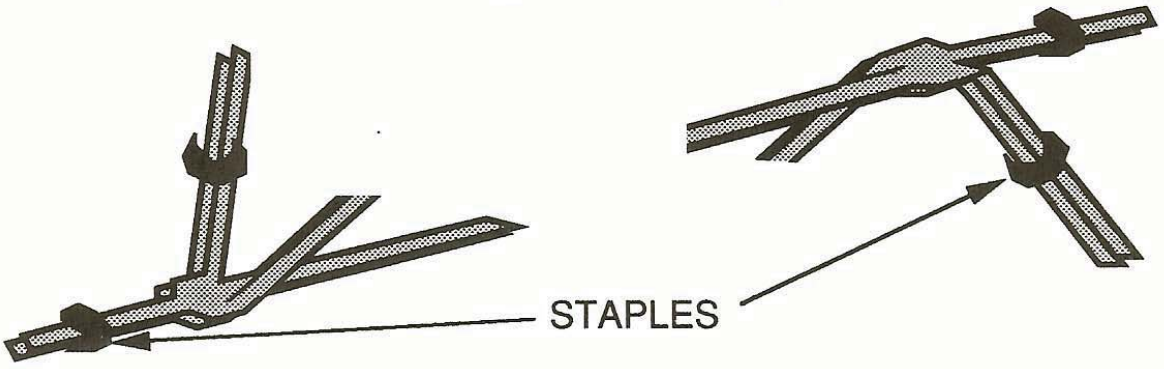
2 covered knots

Latéral covering



1/2 wave

STAPLING



These coverings represent the sufficient and necessary minimum.

It is sometimes useful to move the coverings in order to adjust the panels, thus avoiding any cutting.

The layout of the jambs on the J.K. structures provide the panels with a **natural geometrical inertia**

J.K. panels are self stable.

This quality may be implemented on a larger scale for an entire construction.

To this end, the stiffeners must be transversely attached to the J.K. Structure, as dictated by the arch generators.

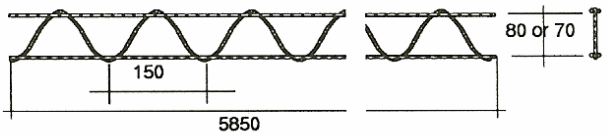
The use of JK POUTRAFIL / WIRE BEAMS/ STIFFENERS allows for an easy assembling of the JK STRUCTURES

THE POUTRAFILS

A "POUTRAFILS" contains round steel galvanized wires that have a diameter of 4.5 mm. Its rupture resistance is 600-750 N/mm2.

The wires are held together in pairs, equidistant from each other, by a 4.5 mm diameter wire folded in zigzag, with a step of 150 mm.

The standard length is 5.85 ml.



Attaching J.K. with Poutrafils offers several advantages :

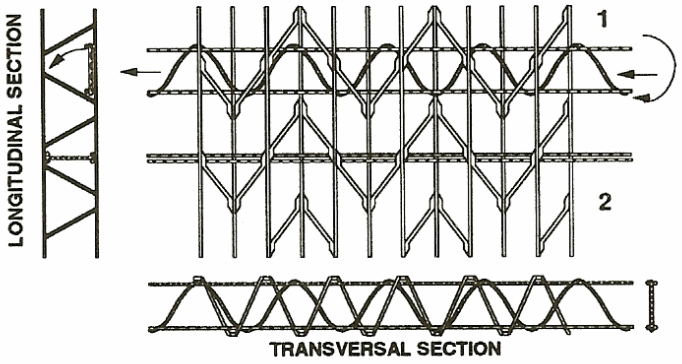
Poutrafils not only serves as a wind-bracind and transversal stiffener for the J.K., but they also avoid binding wires and staples in J.K. coverings.

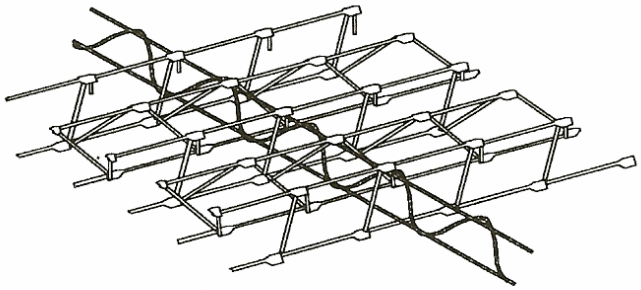
Given that the width of the Poutrafil corresponds to the thickness of the J.K., a Poutrafil inserted into the waves of a J.K. is mechanically self-blocked onto the ribs.

Assembly is then **simple and rapid** :

1 The Poutrafil is sliped flat into the J.K. between two triangular knots (exterior side) ; it is now ready for subsequent J.K. panels to be installed.

2 Once it is postioned definitively, the Poutrafil is set perpendicular by merely rotating it inside the waves of the J.K. where he blocks it self in the cross shaped knots within the construction.

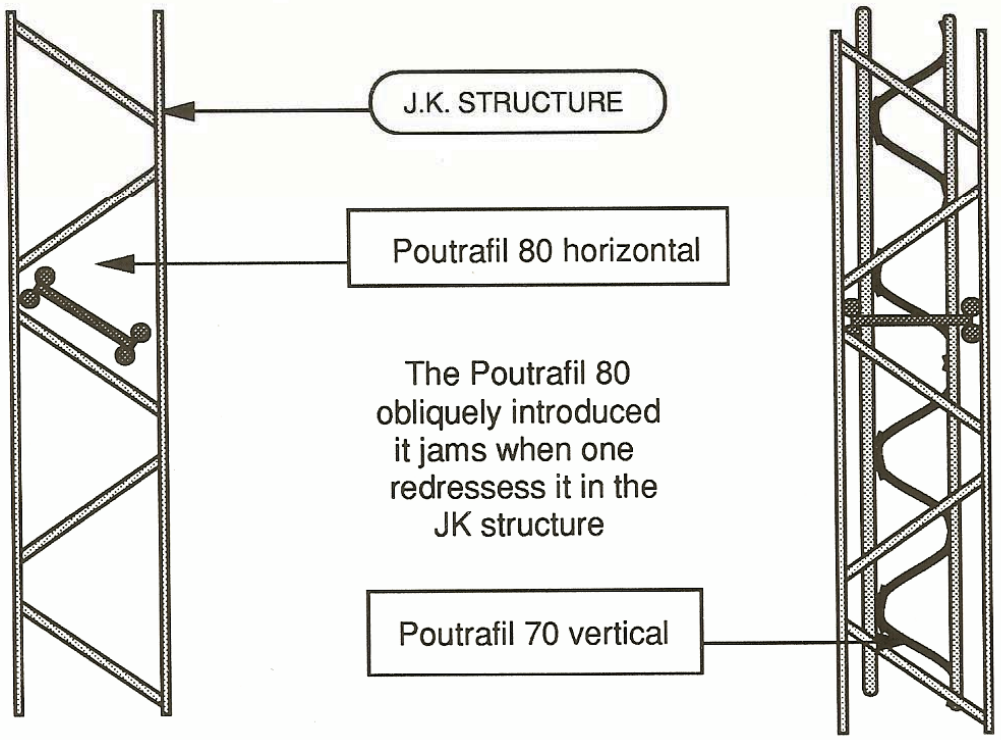


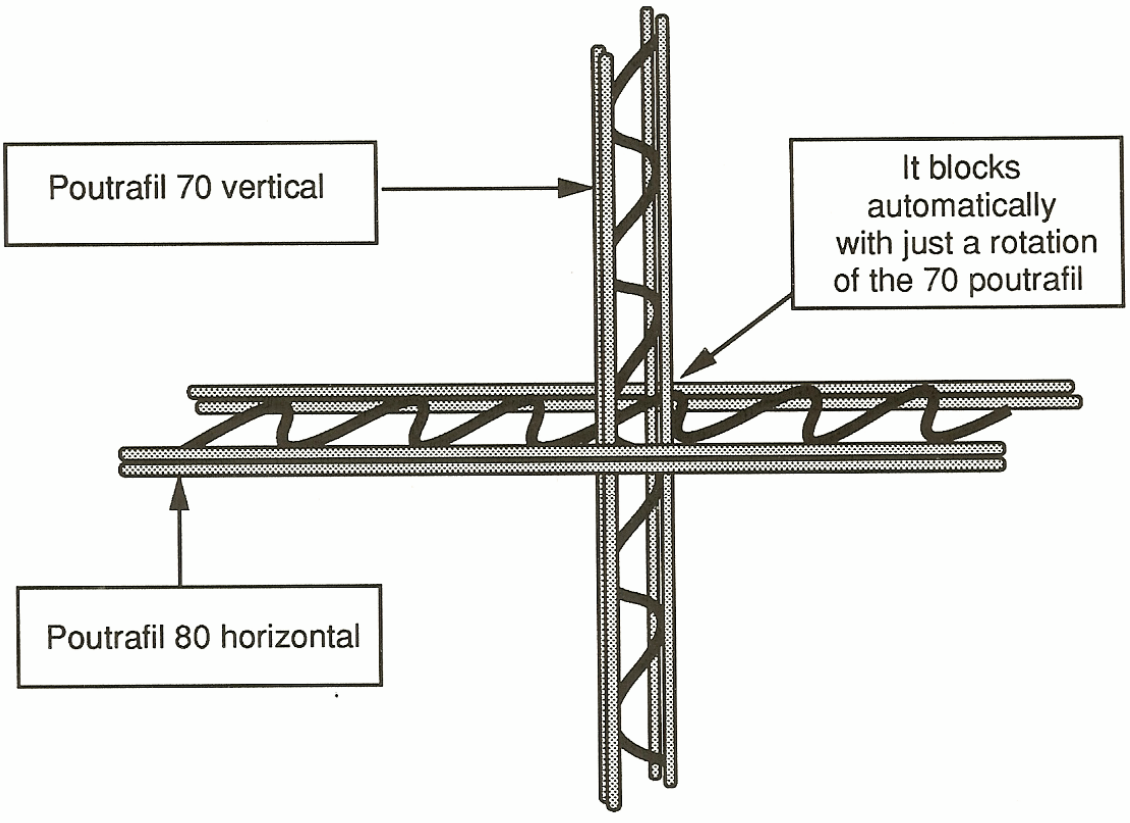


JK STRUCTURES - TECHNICAL FEATURES

STIFFENERS / POUTRAFIL / WIRE STUDS

APPENDIX 5

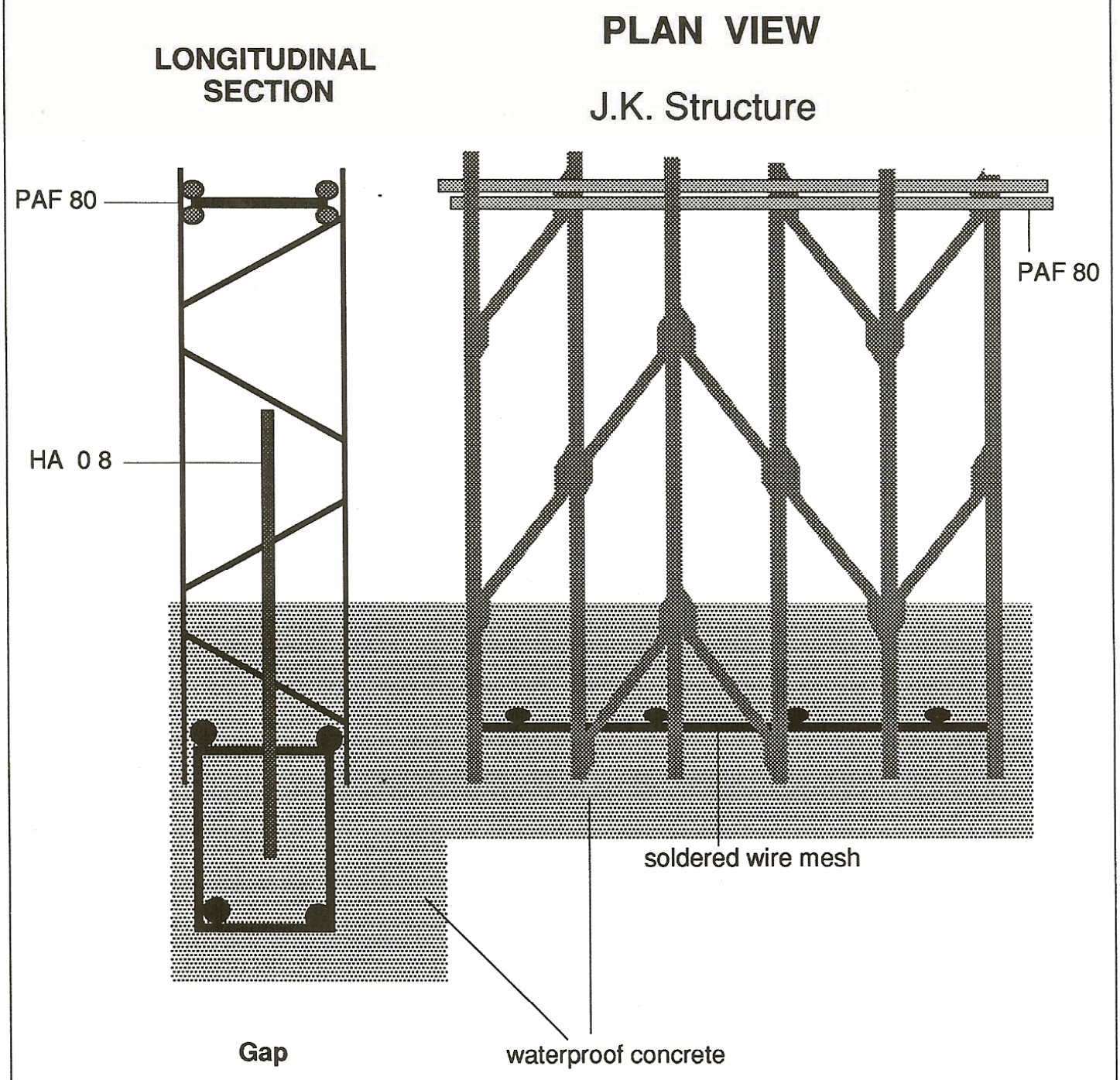




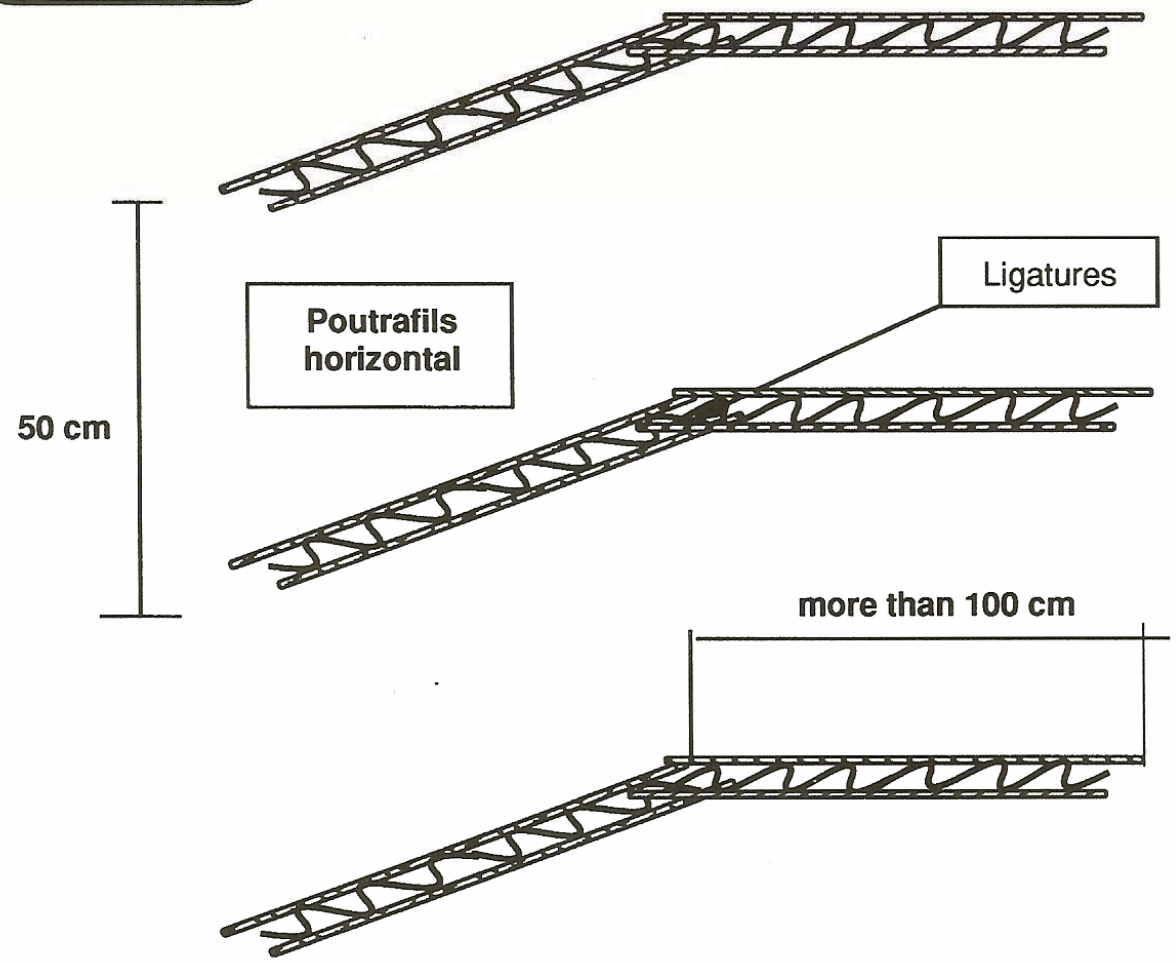
JK STRUCTURES - TECHNICAL FEATURES

GAP

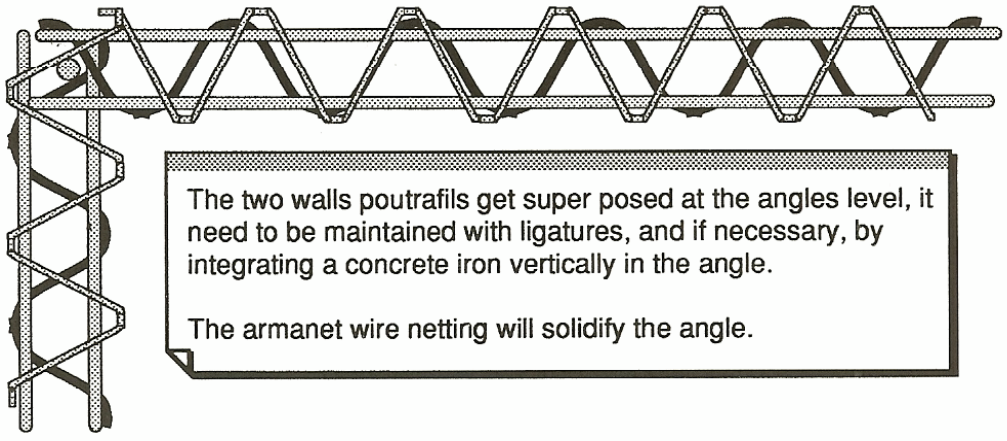
APPENDIX 6



Perspective



Horizontal section



J K STRUCTURE

POUTRAFIL

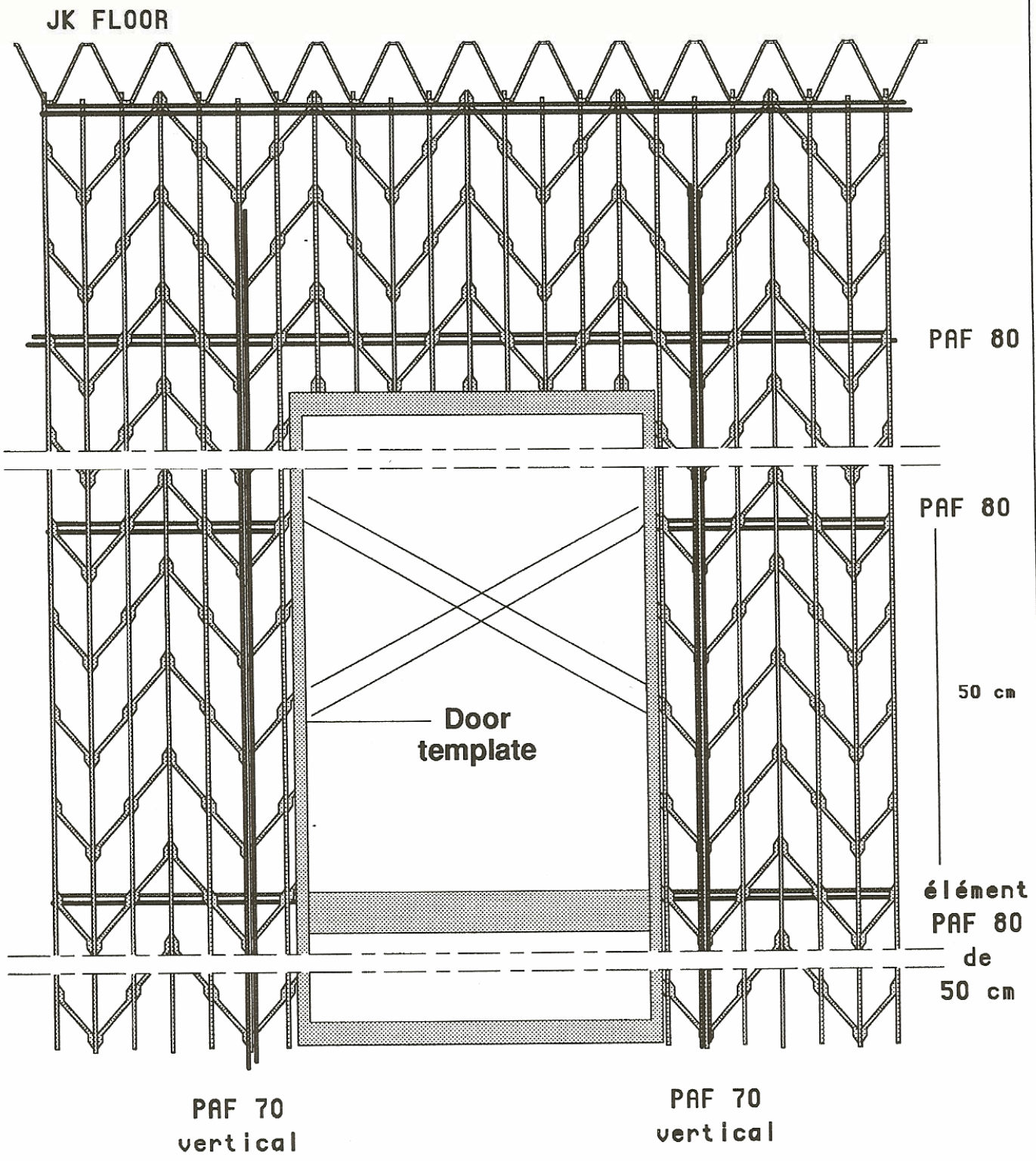
The two walls poutrafils get super posed at the angles level, it need to be maintained with ligatures, and if necessary, by integrating a concrete iron vertically in the angle.

The armanet wire netting will solidify the angle.

JK STRUCTURES - TECHNICAL FEATURES

THE OPENINGS

APPENDIX 8

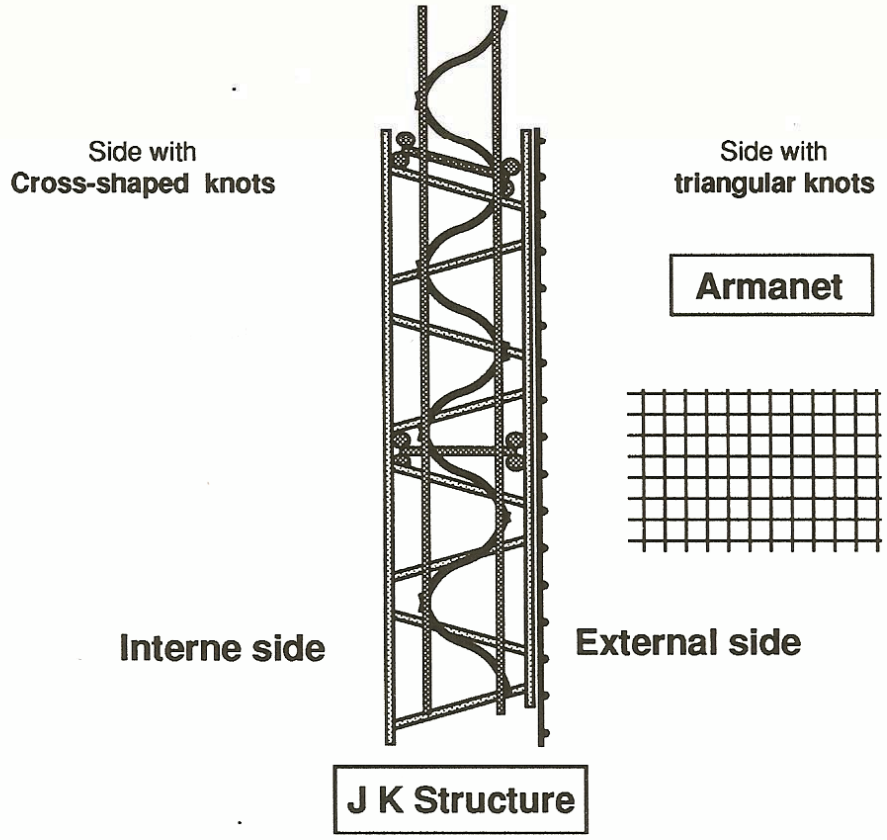


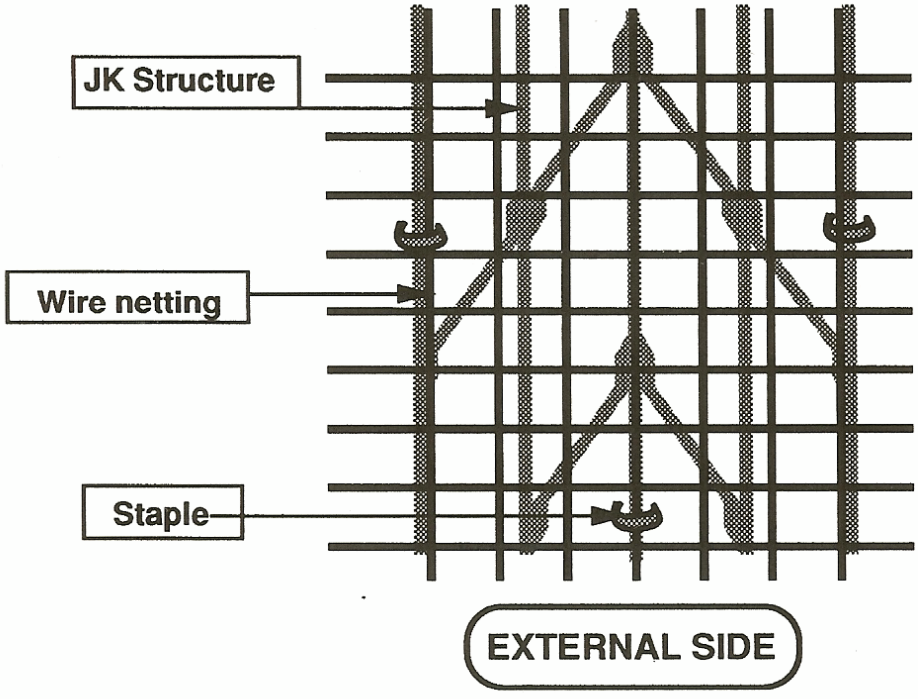
JK STRUCTURES - TECHNICAL FEATURES

INJECTION FRAMES

APPENDIX 9

THE JK STRUCTURE WALL BECOMES AN INJECTION FRAME ONCE COVERED ON BOTH SIDES WITH A GALVANISED TRIPLE TORSION WIRE NETTING

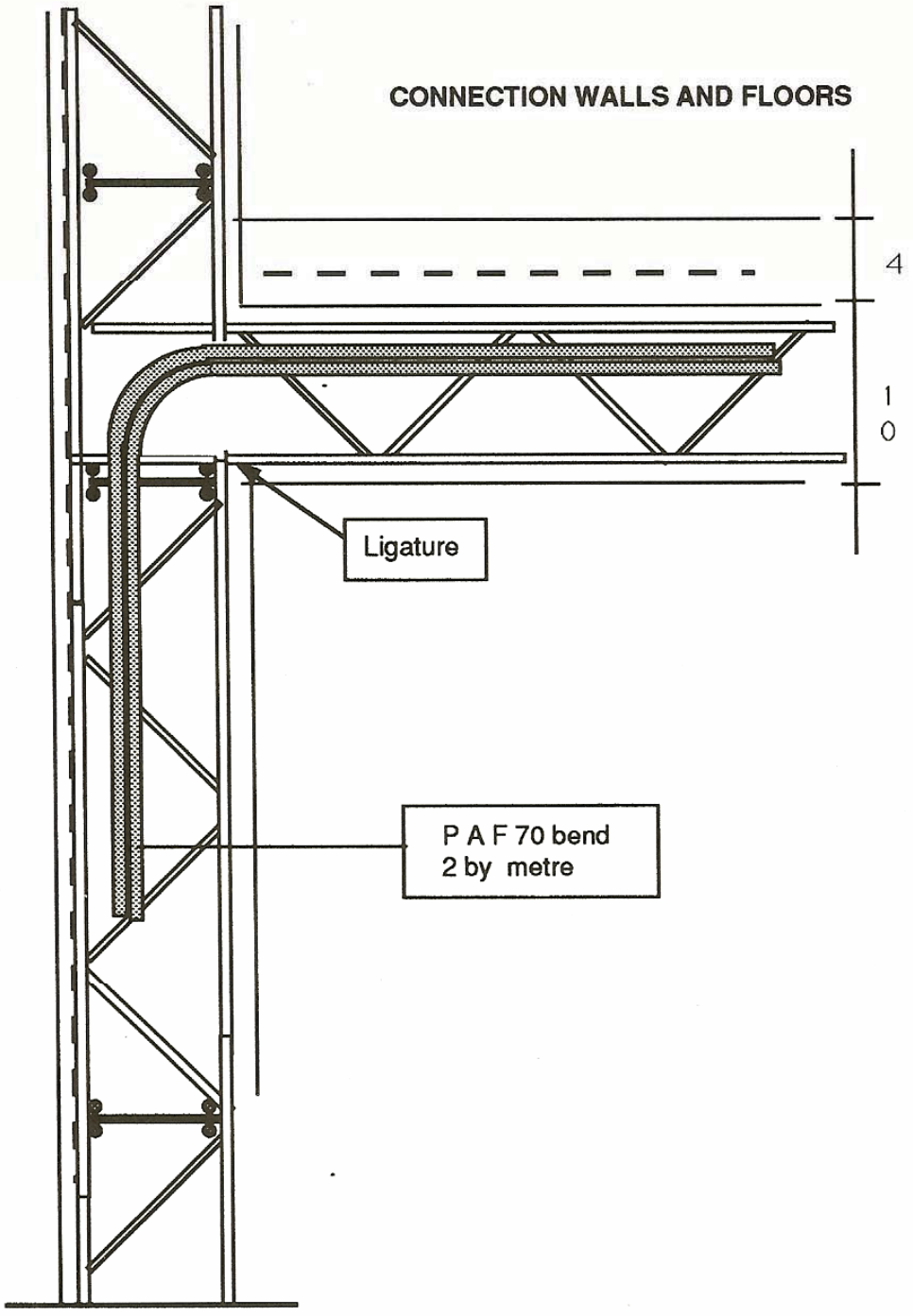




JK STRUCTURES - TECHNICAL FEATURES

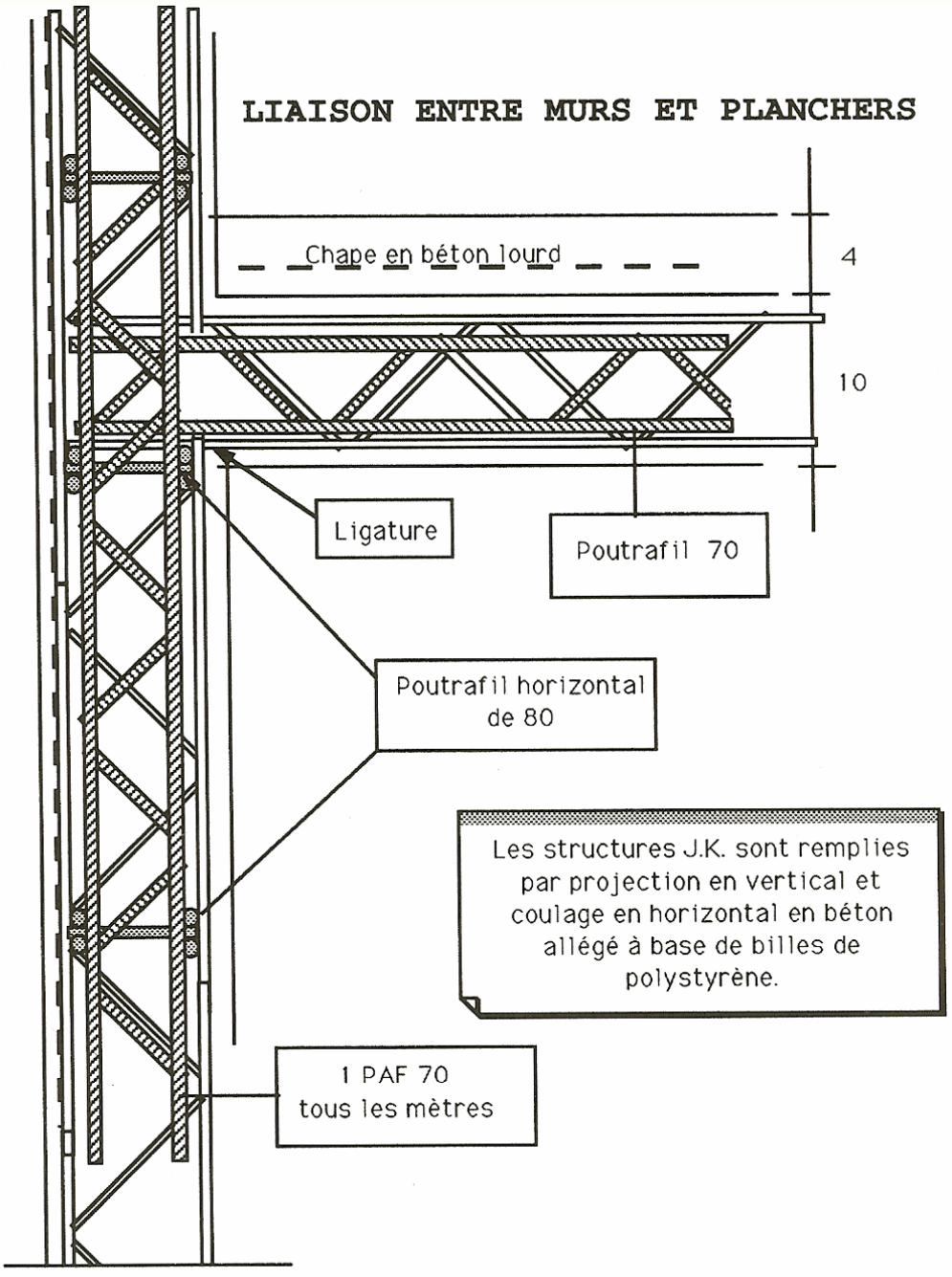
LIAISON BETWEEN WALLS AND FLOORS

APPENDIX 10



JK STRUCTURES - TECHNICAL FEATURES
LIAISON BETWEEN WALLS AND FLOORS

APPENDIX 10 B

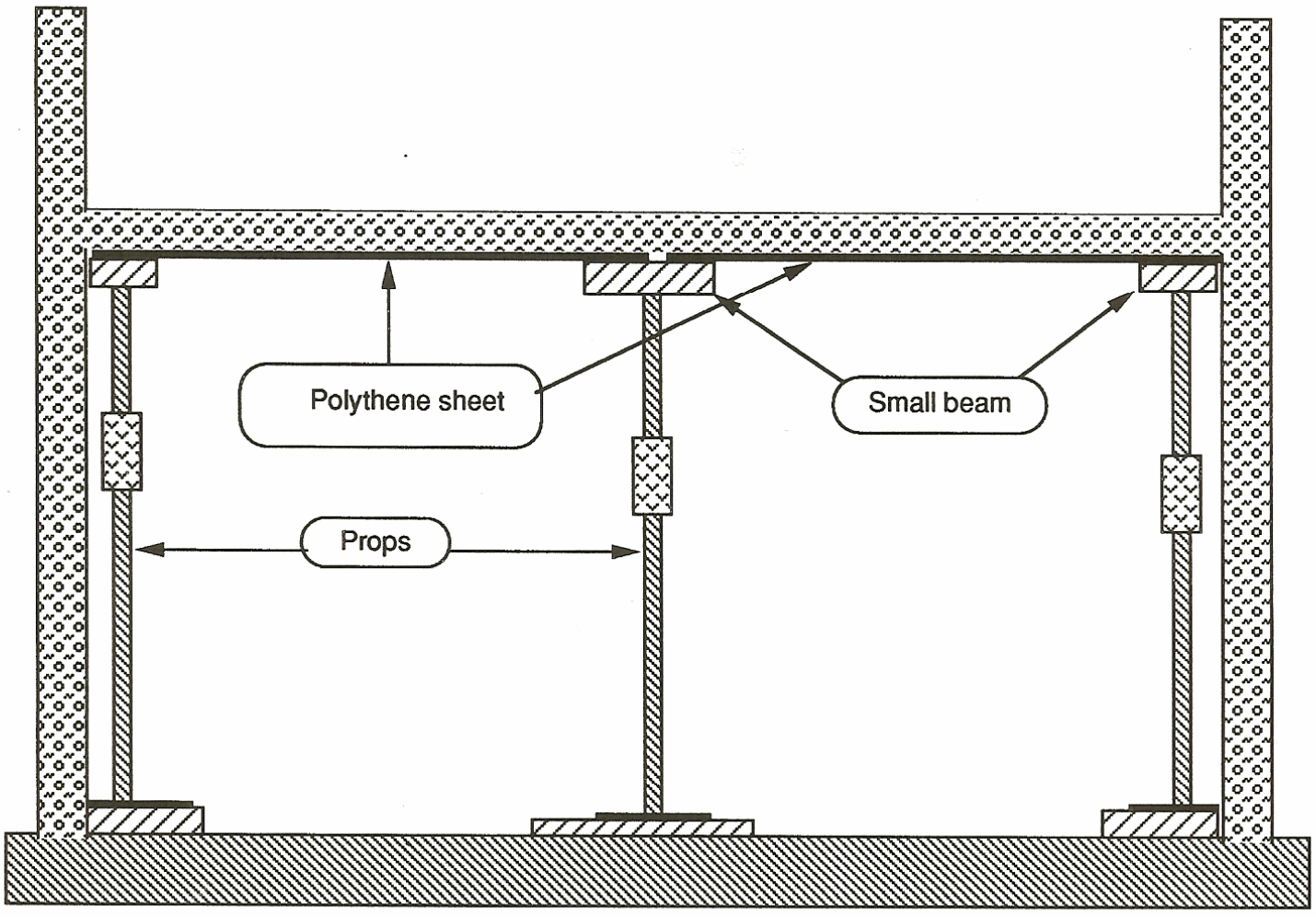


JK STRUCTURES - TECHNICAL FEATURES

PROPPING UP THE FLOORS
DURING THE CONCRETE INJECTION PROCESS

APPENDIX 11

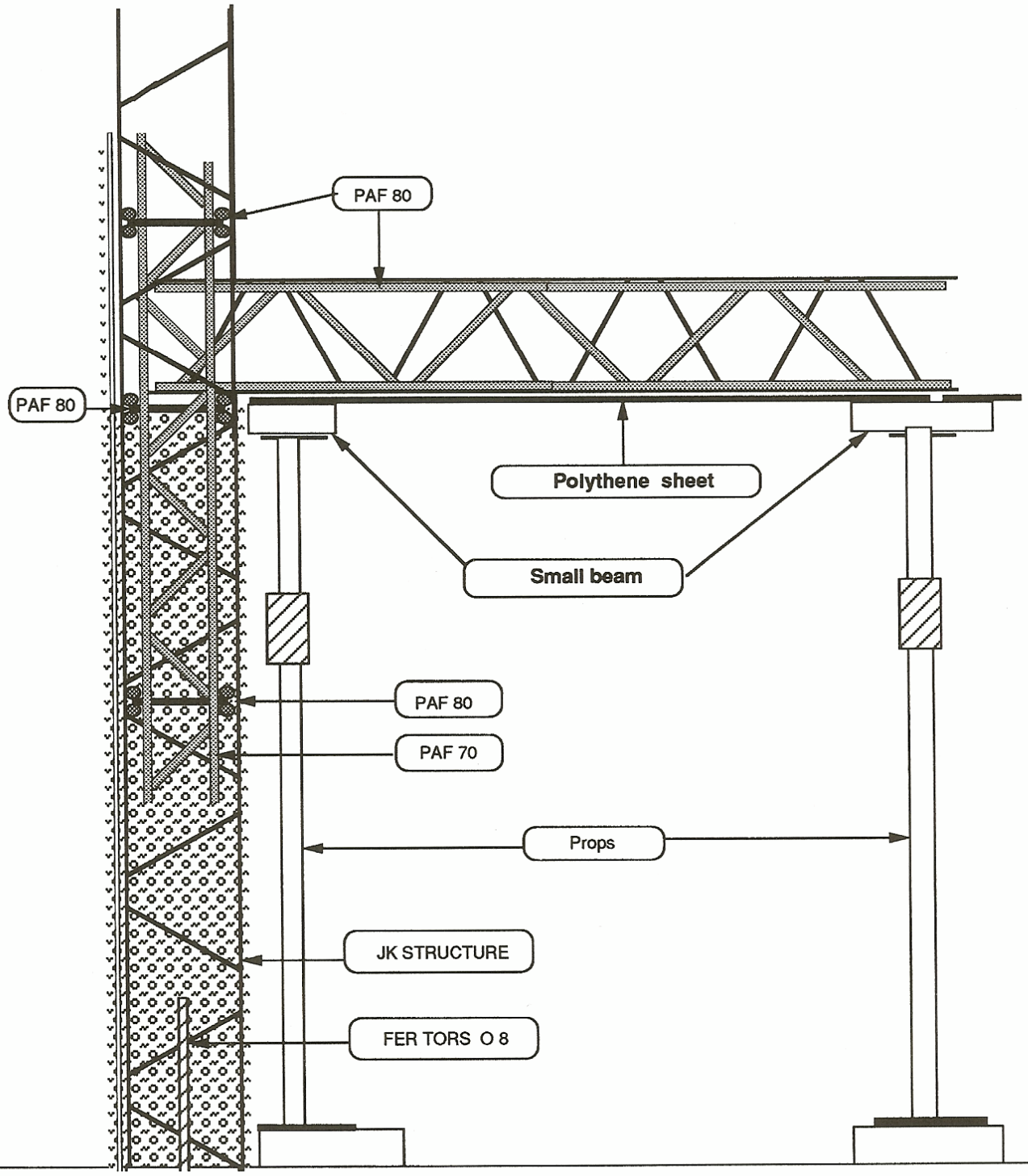
THE ALLEVIATED CONCRETE, A MIXTURE OF EXPANDED POLYSTYRENE BEADS - EPS - AND CEMENT, HAS THE TEXTURE OF A THICK PASTE AND NOT OF A LIQUID, AND THEREFORE REQUIRES ONLY VERY BASIC PROPPING UP WITH LARGE POLYETHYLENE SHEETS (2M X 2M OR WIDER)



JK STRUCTURES - TECHNICAL FEATURES

PROPPING UP THE FLOORS
DURING THE CONCRETE INJECTION PROCESS

APPENDIX 11 B



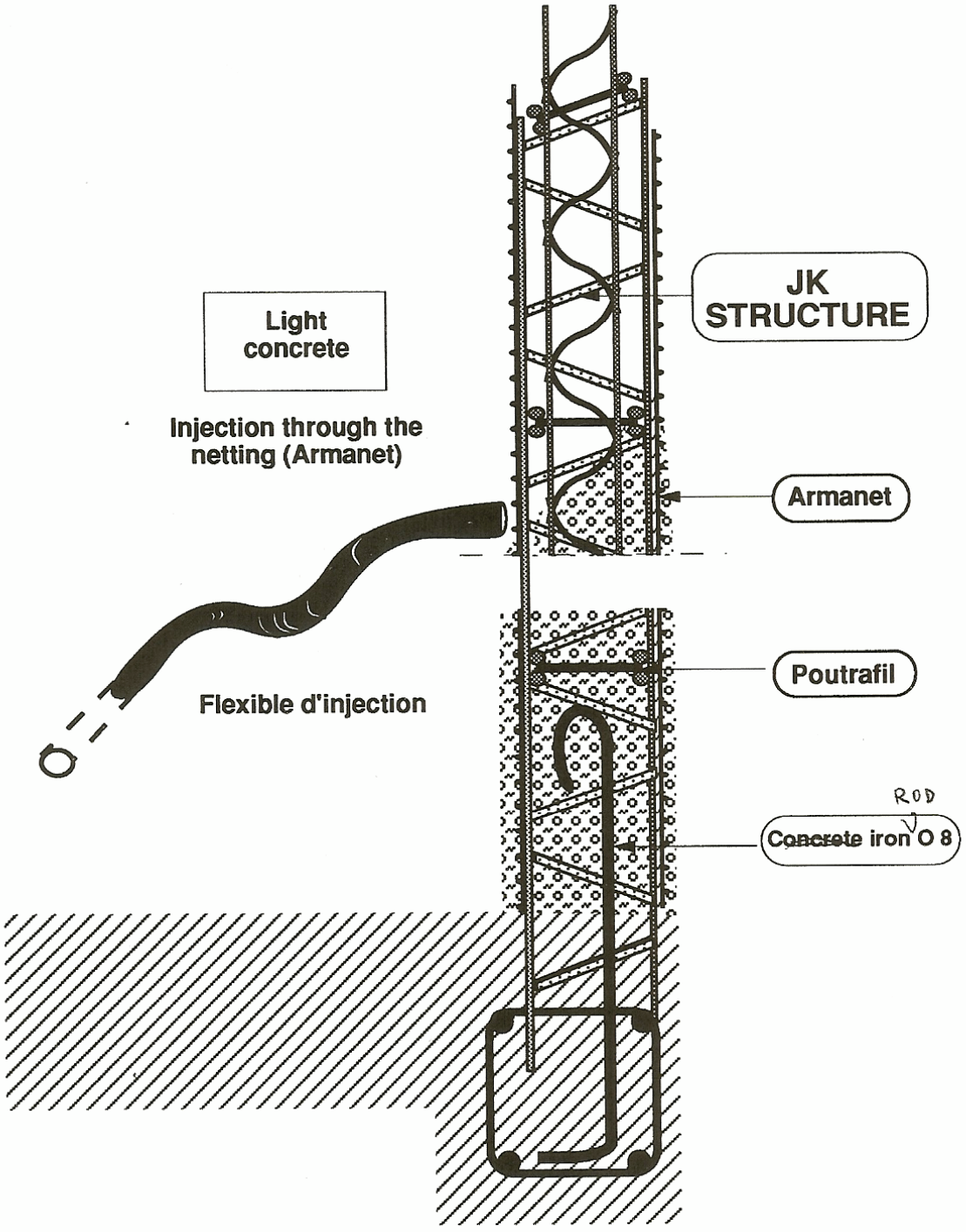
JK STRUCTURES - TECHNICAL FEATURES

THE INJECTION OF THE ALLEVIATED CONCRETE

APPENDIX 12

THE INJECTION OF THE ALLEVIATED CONCRETE INTO THE JK STRUCTURE, IS PERFORMED WITH AN INJECTION PUMP VIA A HOSE THAT WILL INJECT THE ALLEVIATED CONCRETE RIGHT INTO THE STRUCTURE VIA THE HOLES OF THE WIRE NETTING PREVIOULSLY FITTED ONTO THE JK STRUCTURE (APPENDIX 9)

(MANUAL FILLING, WHILE FEASIBLE, IS NOT TIME/COST EFFECTIVE)



JK STRUCTURES - TECHNICAL FEATURES

THE JK STRUCTURE WALL
AFTER INJECTION WITH ALLEVIATED CONCRETE AND COATING

APPENDIX 13