Planning

Memo 35

Did you know this about BSF, BCC?

1. For long, slender columns it might be useful to take into consideration that the use of BSF, BCC connections <u>reduces eccentricity.</u>

200   100

Fv

$e_n = 300$

Column   400x400

Normal Corbels

200

Fv

$e_{BSF} =$ 150   50

Column   400x400

BSF Corbels
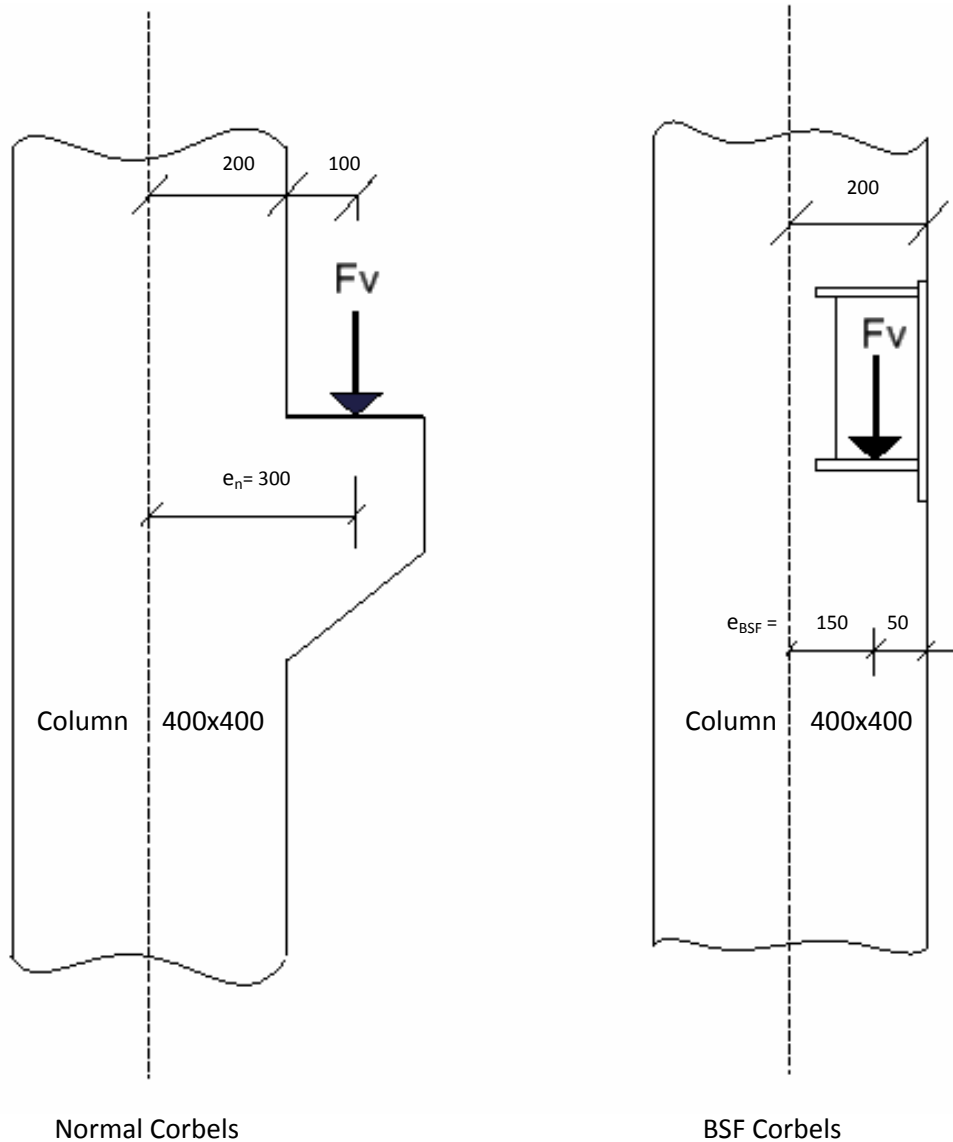
In the example we have shown, with a column 400x400 mm, the eccentricity, and hence the corresponding bending moment is reduced to about the half from using a traditional corbel. This might sometimes be of great importance for the design and the "connection-economy".

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Invisible connections™

Did you know this about BSF, BCC?

2. Removable steel brackets have been used as temporary torsion support for BSF.
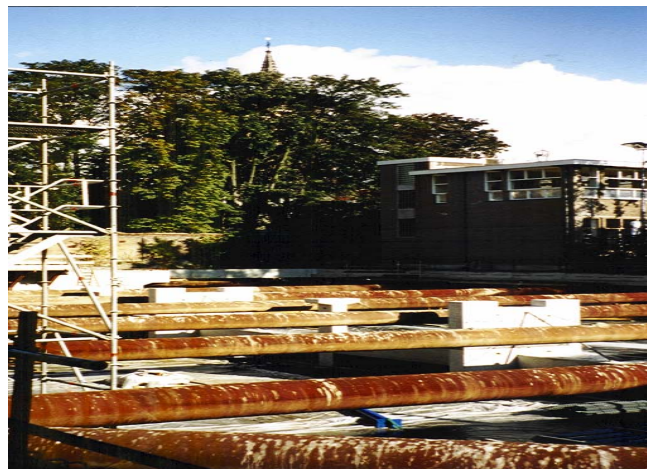
These pictures are from September 2000 from an underground Car Park project in Delft, Holland. The structure is designed for 210 cars in 6 levels below ground.

The engineering challenge was that the water level is only 1,5 meter (6ft) below ground, while the excavation was 14 meter (42 ft) deep. The rusty steel pipes on the picture are temporary brazing. The limited space during erection was an important argument for using the BSF-system.

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Did you know this about BSF, BCC?

3. BSF connections have been used in "gerber"-solutions.

To reduce beam dimension, it is sometimes advantageous to move the connection close to the zero-moment- zone, for continuous beams.

An alternative for freely supported beams is to enlarge the width of the column top.

This picture is from an office building at Heathrow Airport in London, UK.

Twin connections are used in the low, wide beam.

Did you know this about BSF, BCC?

4. BSF connections are often also used in connecting "high beams", like wall elements to columns, or wall element to other wall elements.