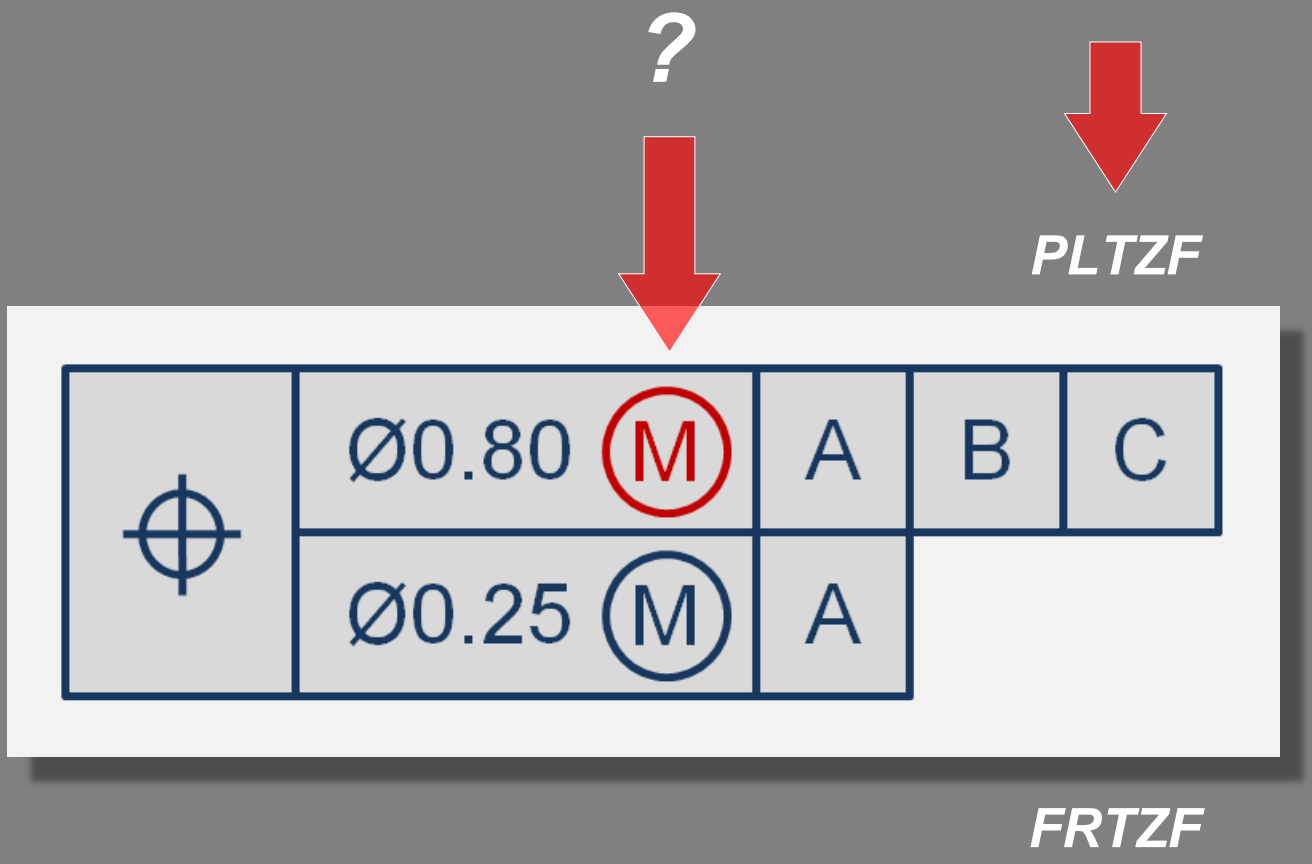
This is absolutely false. the lower segment of a **composite tolerance** controls the Feature to feature relationship whereas the upper segment controls the entire pattern in relation to the datum reference frame. The two types of segments are referred to as the *Feature-Relating Tolerance Zone Framework* or *FRTZF*, and the *Pattern-Locating Tolerance Zone Framework* or *PLTZF* respectively.

Really? The entire pattern?

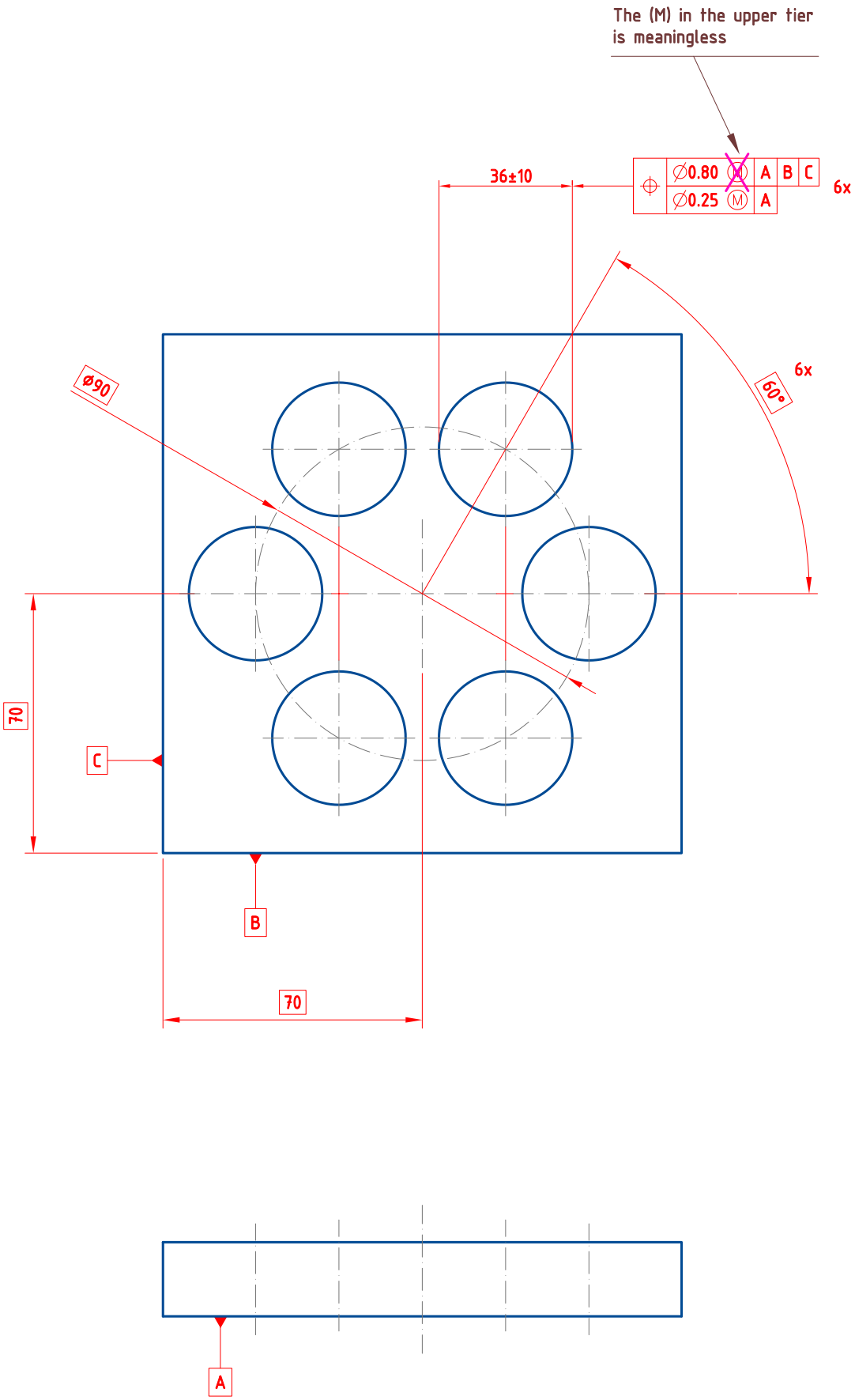
An effort to understand what this could mean.



The Pattern Locating Tolerance Zone Framework

Pic. #1

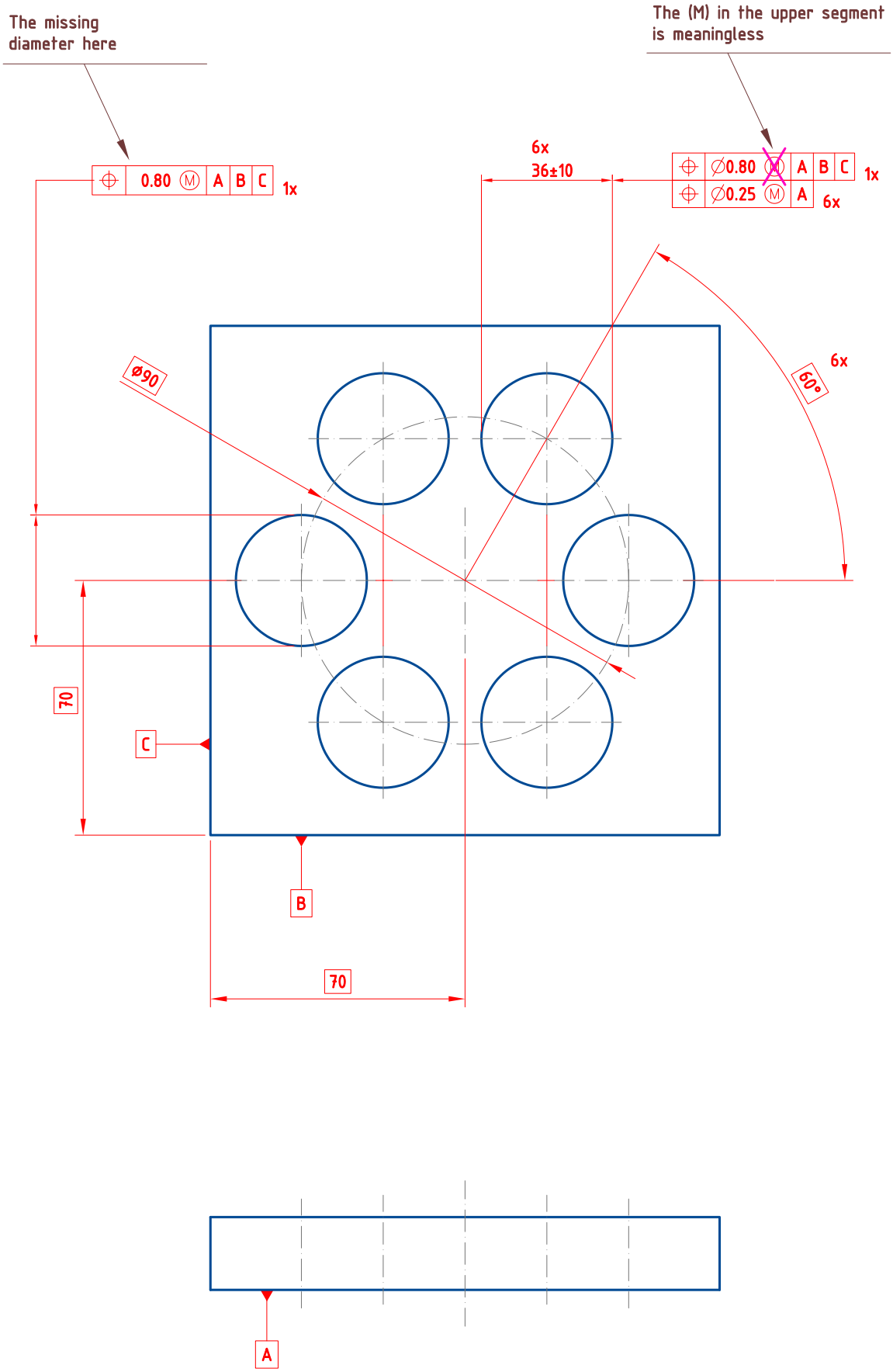
The Composite True Position



The Pattern Locating Tolerance Zone Framework

Pic. #2

The Single Segment True Position

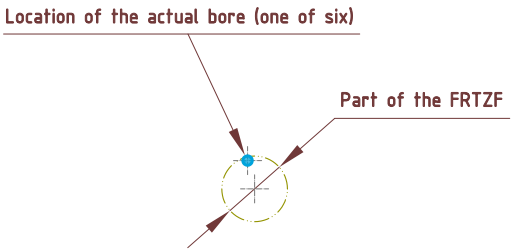


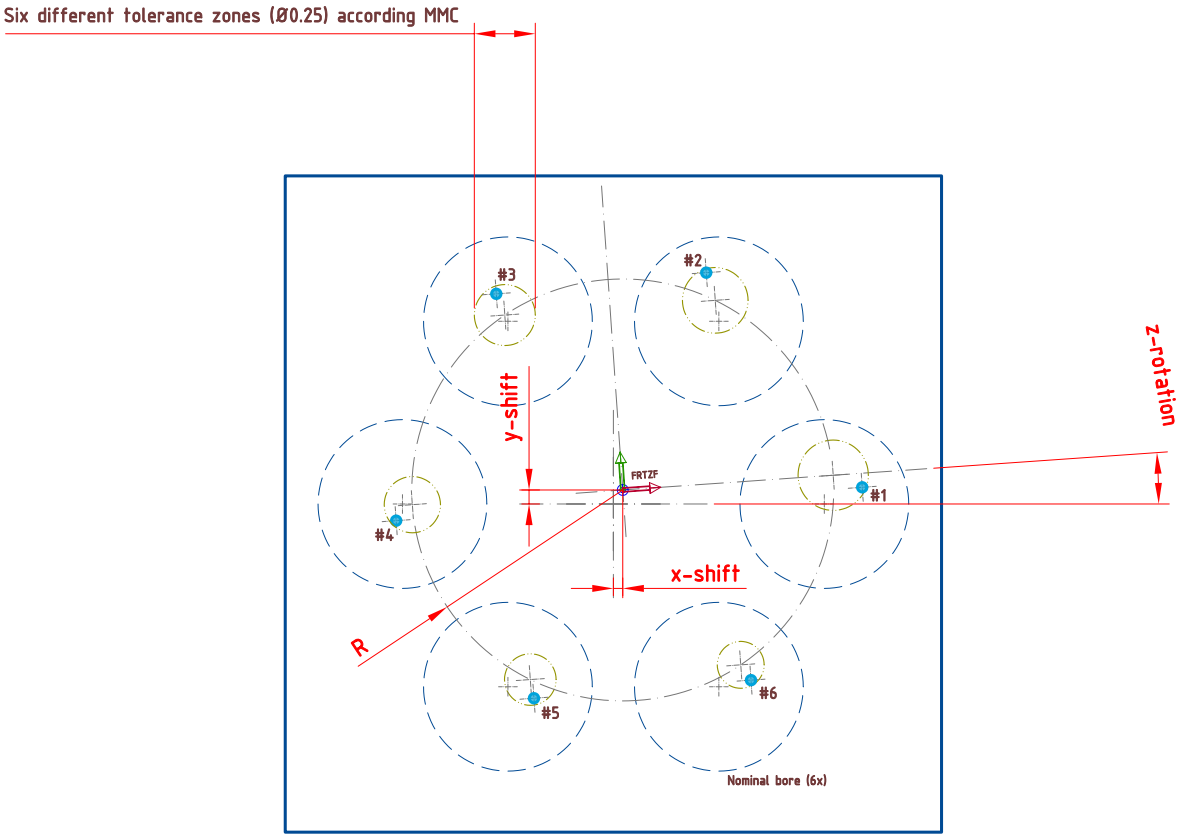
The Pattern Locating Tolerance Zone Framework

Pic. #3

The Composite True Position
Six tolerance zones Ø0.25 (plus bonus)
and six actual positions

The FRTZF as a result of Best-Fit



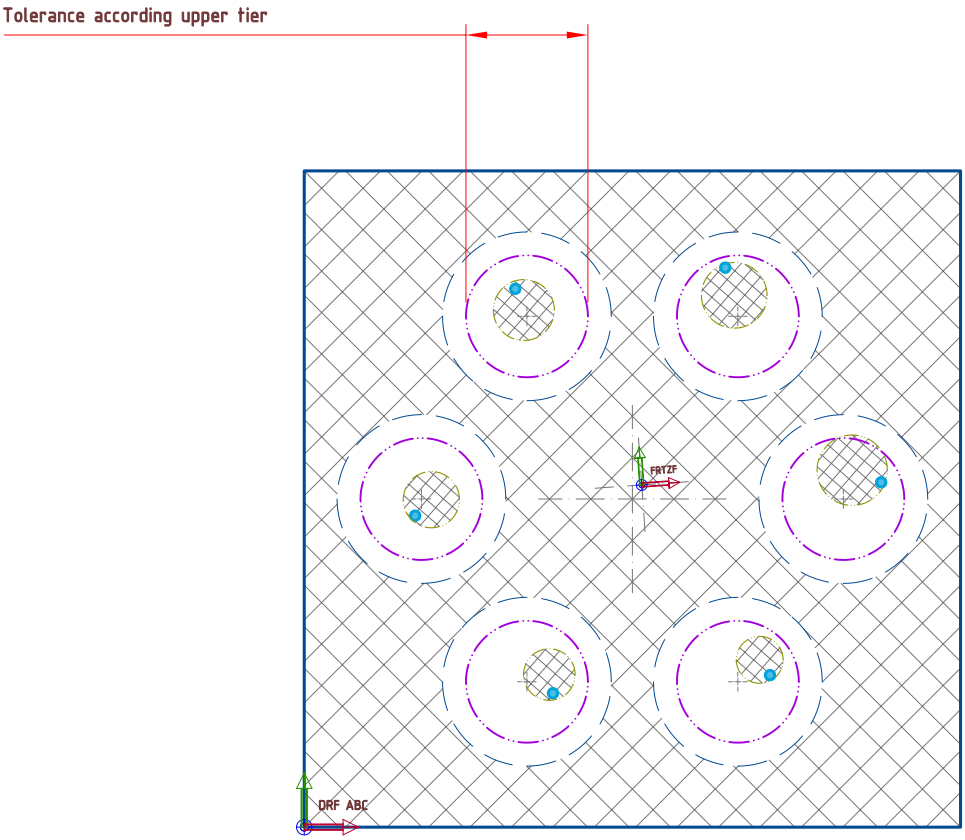


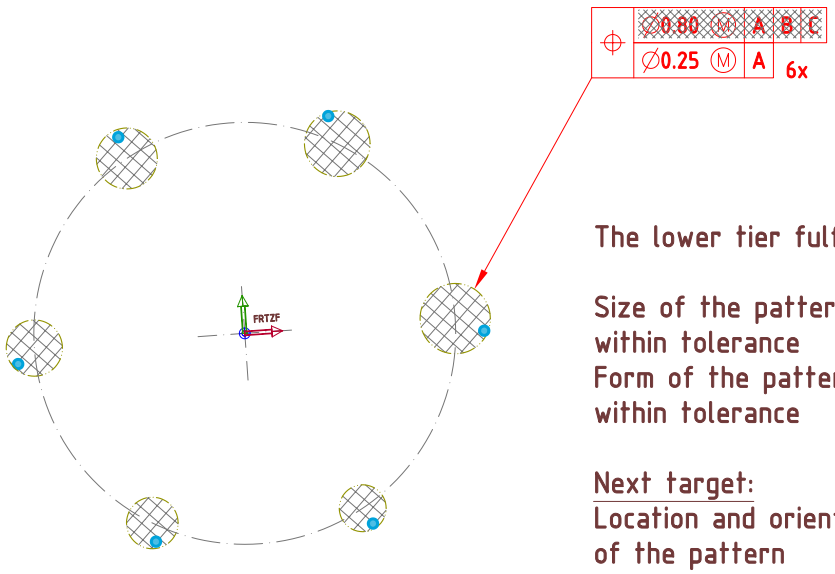
Bonus-tolerance zones:	
#1:	0.38
#2:	0.36
#3:	0.34
#4:	0.32
#5:	0.30
#6:	0.28

The Pattern Locating Tolerance Zone Framework

Pic. #4

The Composite True Position
Six tolerance zones Ø0.25 (plus bonus)
Six tolerance zones Ø0.80 (without bonus)
and six actual positions





The lower tier fulfilled:

Size of the pattern
within tolerance
Form of the pattern
within tolerance

Next target:
Location and orientation
of the pattern

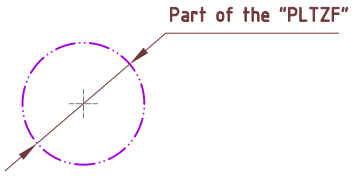
The Pattern Locating Tolerance Zone Framework

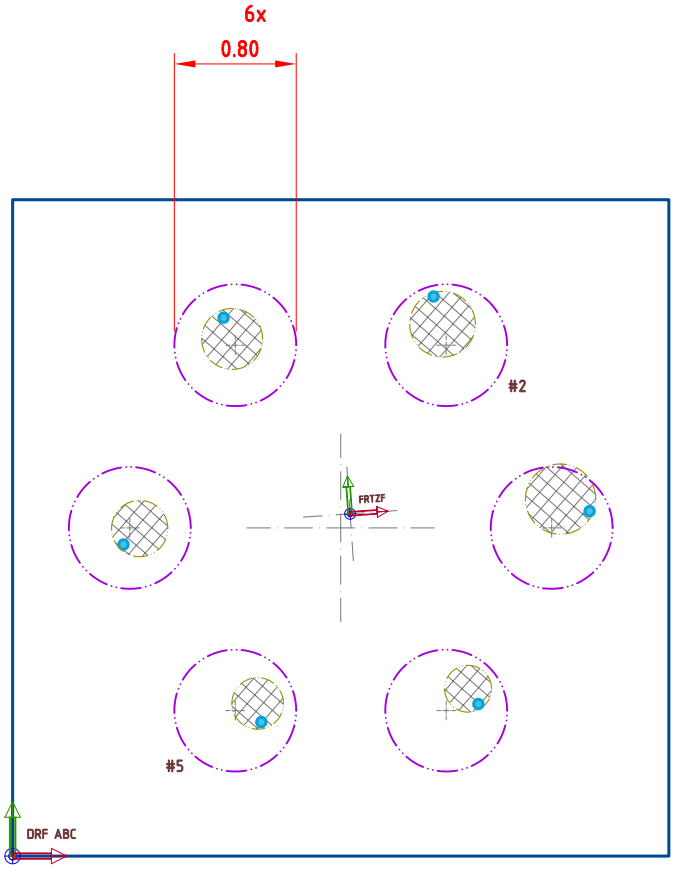
Pic. #5

The Composite True Position

The location of the pattern,that is limited by the "PLTZF"

The direction of the pattern,that is limited by the "PLTZF"





Question:
When regarding the location of the pattern,do we need all six bores?

NO!

When regarding the direcion of the pattern,do we need all six bores?

NO!

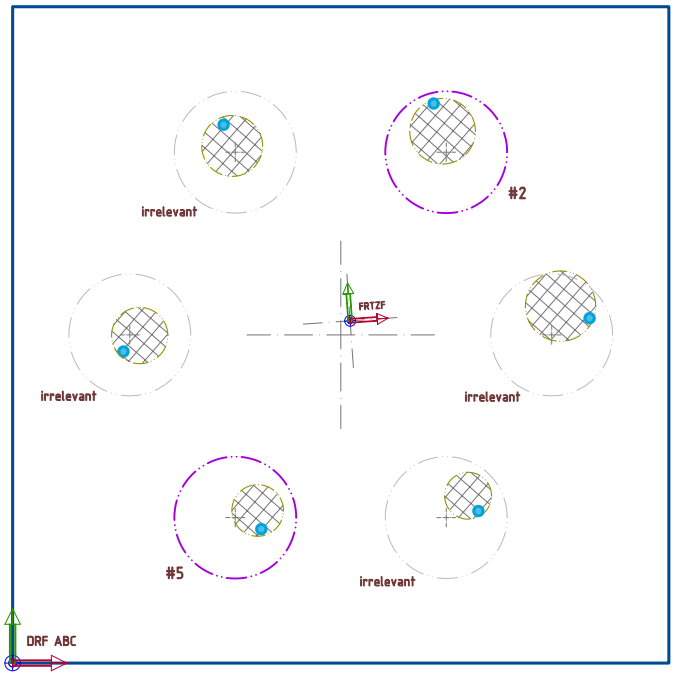
The Pattern Locating Tolerance Zone Framework

Pic. #6

The Composite True Position

The two bores that define a
"Reduced PLTZF".
This framework is limiting
location and orientation
of the "Virtual Assembling Part".

Bores #1 ; 3 ; 4 ; 6 have
not be regarded!



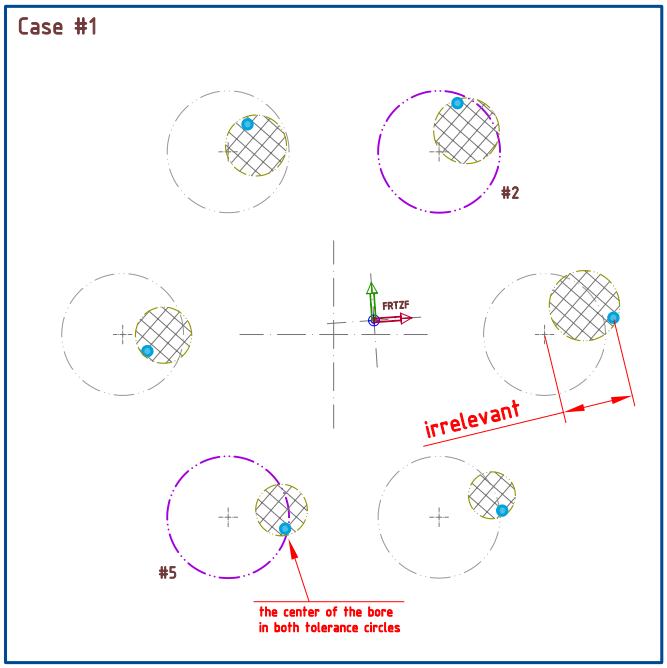
The fitting function with the
"Virtual Assembling Part" is
accomplished by regarding
the FRTZF.
Therefore:
The MMC on the PLTZF in the
upper tier is meaningless.

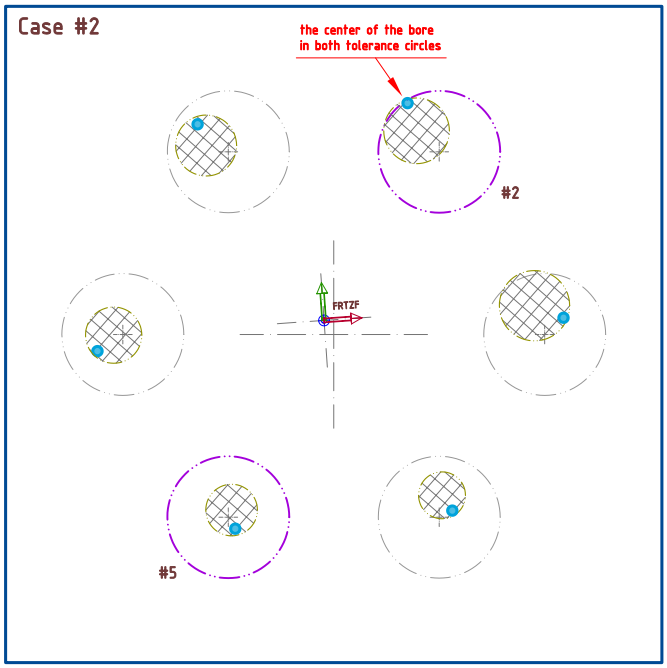
The Pattern Locating Tolerance Zone Framework

Pic. #7

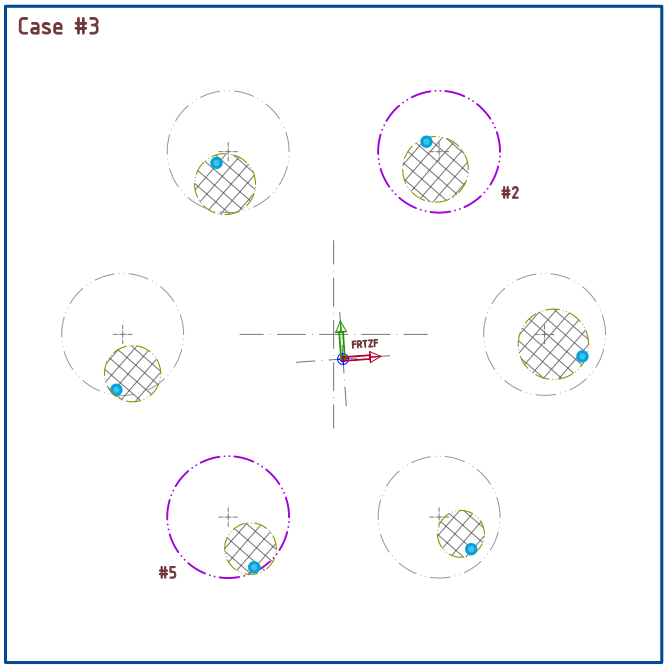
The Composite True Position

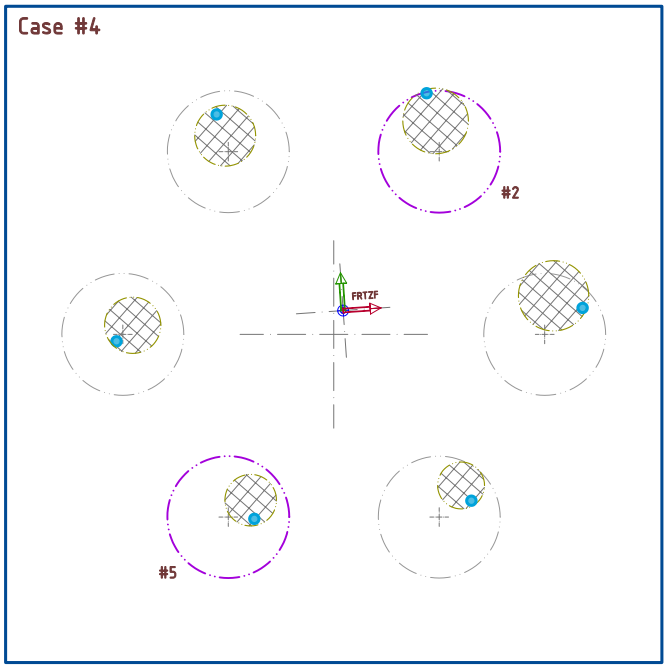
Four different patterns in order to show the functionality of a "Reduced PLTZF".





Translation only



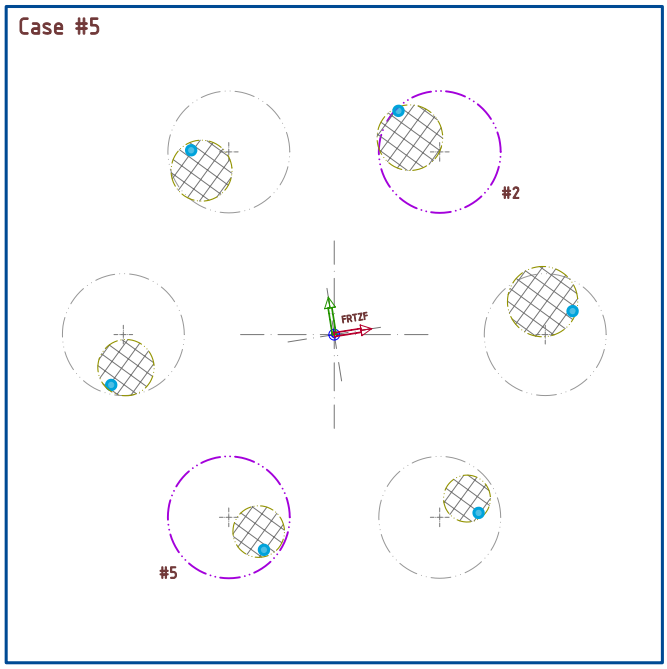


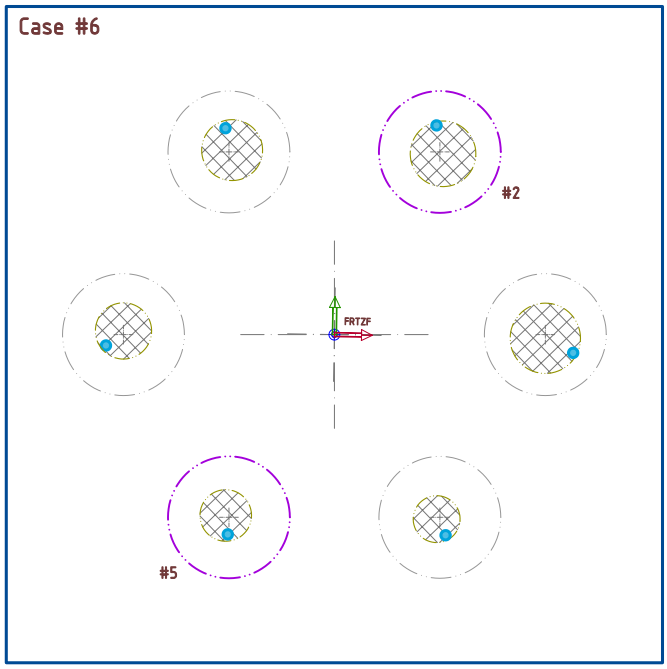
The Pattern Locating Tolerance Zone Framework

Pic. #8

The Composite True Position

Four different patterns in order to show the functionality of a "Reduced PLTZF".





Rotation only