

Figure 3-1 (RMB) and axis of related AME resulting from the datum reference portion of the feature control frame controlling position (true geometric counterpart axis)

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Related AME (true geometric counterpart to datum plane A (true geometric counterpart of datum feature B))

Unrelated AME (external)

Axis of unrelated AME (feature of size axis) used to verify the perpendicularity control

Derived median line

Actual local sizes

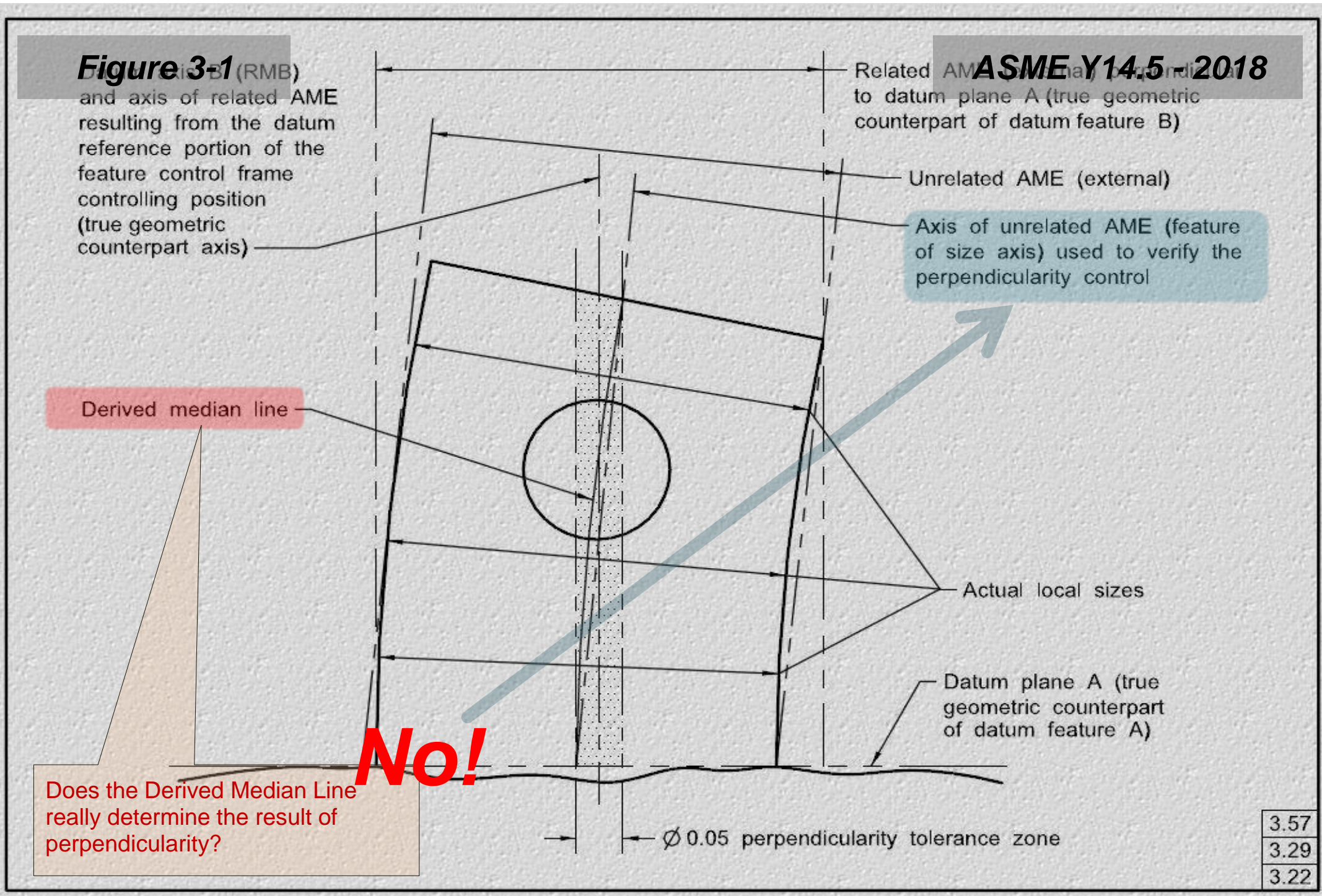
Datum plane A (true geometric counterpart of datum feature A)

$\varnothing 0.05$ perpendicularity tolerance zone

No!

Does the Derived Median Line really determine the result of perpendicularity?

3.57
3.29
3.22



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Related AME (true geometric counterpart to datum plane A (true geometric counterpart of datum feature B))

Unrelated AME (external)

Axis of unrelated AME (feature of size axis) used to verify the perpendicularity control

Derived median line

So, what is the criterion for the orientation of these three double arrows that are obviously not parallel to each other and not perpendicular to UAME?

Actual local sizes **1-3**

Datum plane A (true geometric counterpart of datum feature A)

$\varnothing 0.05$ perpendicularity tolerance zone

3.57
3.29
3.22

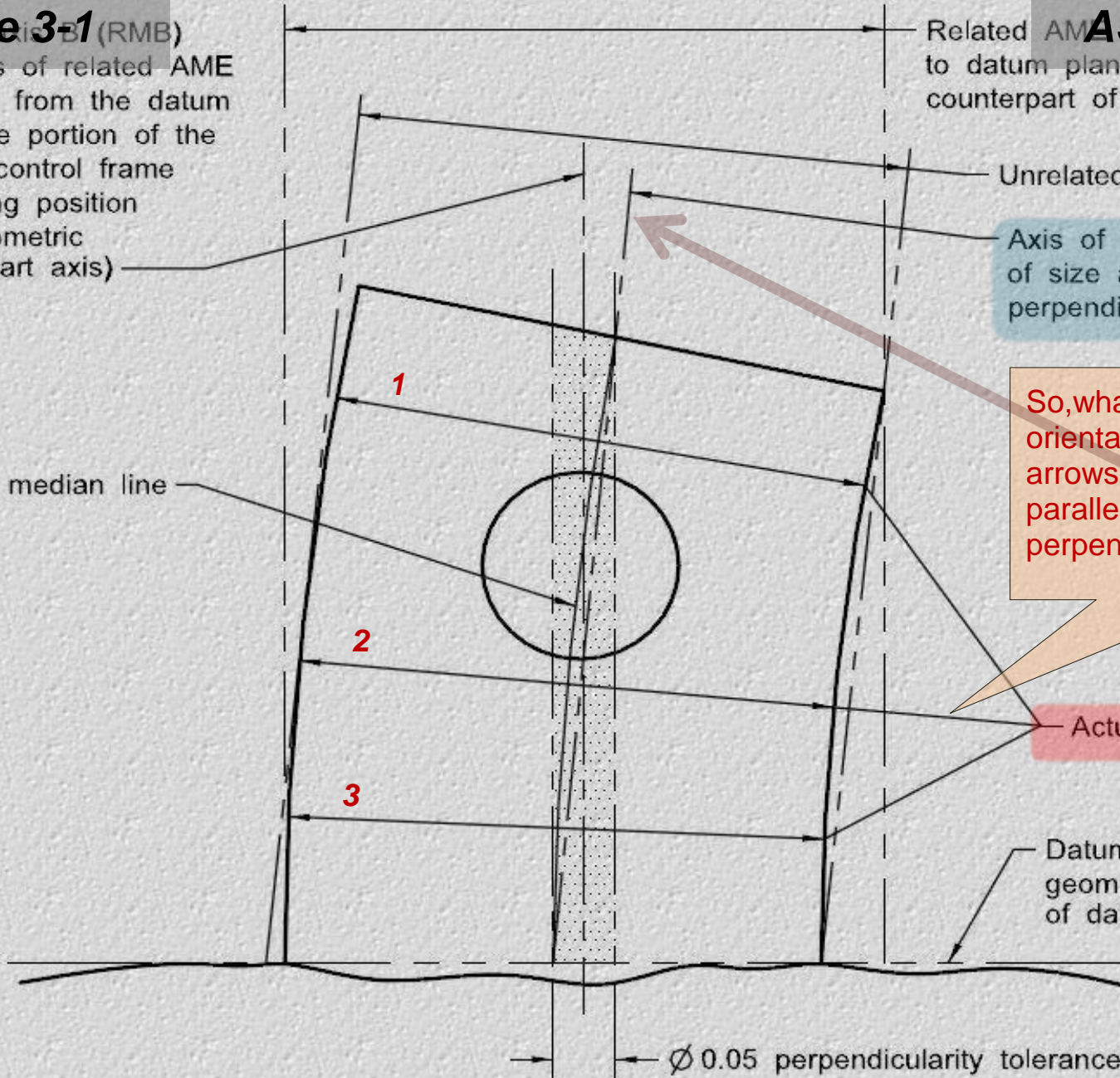
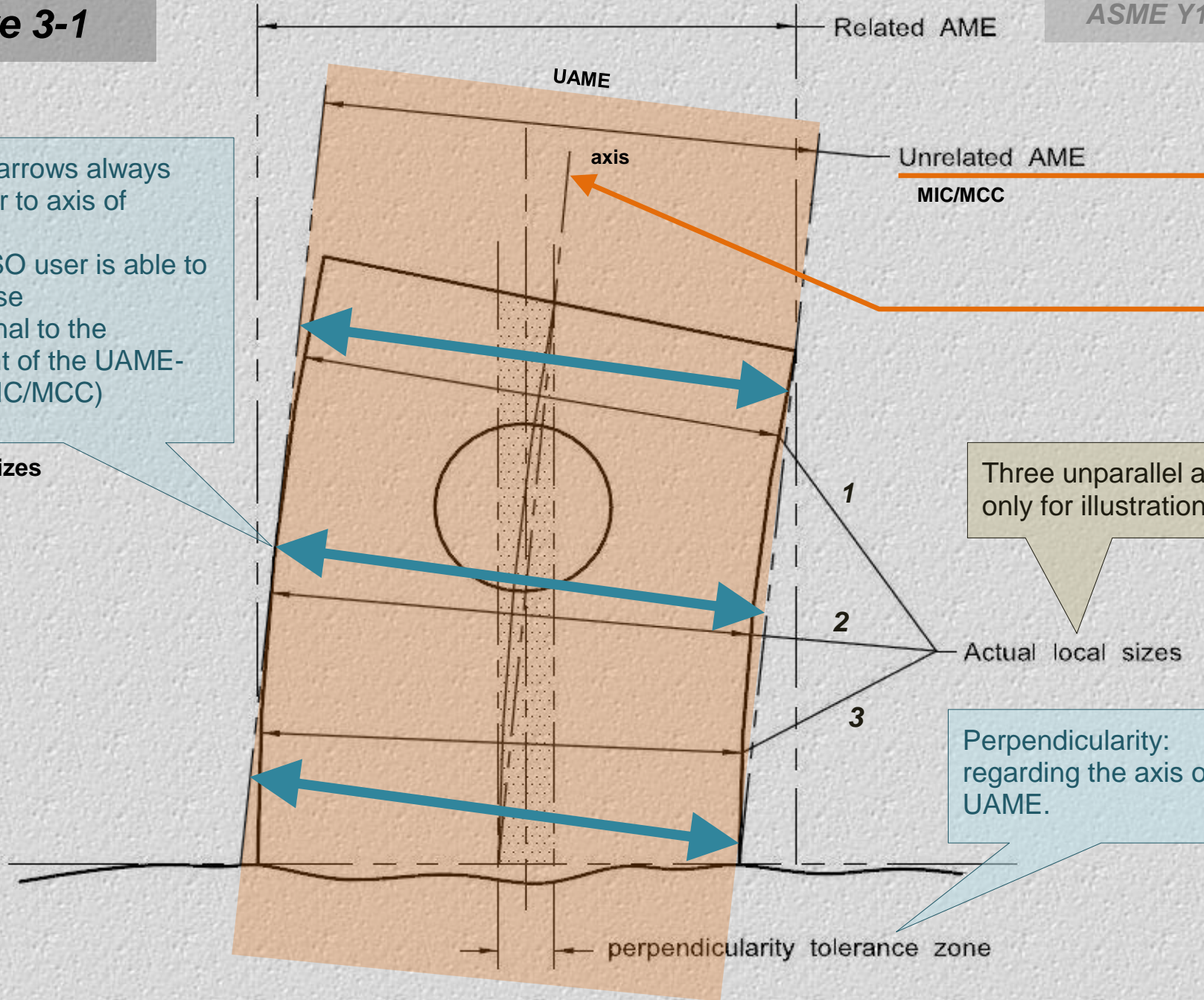


Figure 3-1

These three arrows always perpendicular to axis of UAME. The CALYPSO user is able to measure these sizes, additional to the measurement of the UAME-diameter. (MIC/MCC)

actual local sizes (3x)

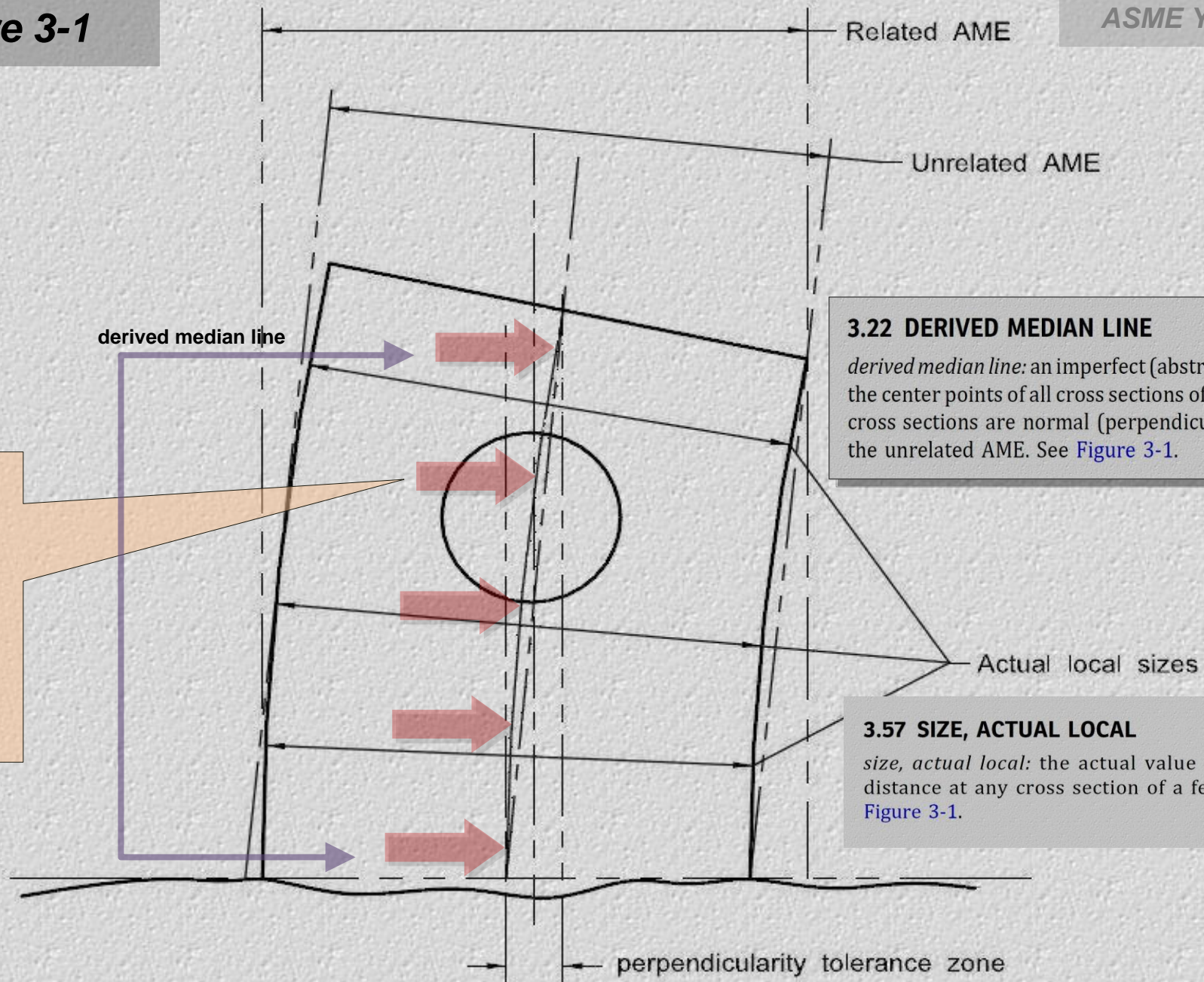


Three unparallel arrows only for illustration? ?

Perpendicularity: regarding the axis of UAME.

3.57
3.29
3.22

Figure 3-1



3.22 DERIVED MEDIAN LINE
derived median line: an imperfect (abstract) line formed by the center points of all cross sections of the feature. These cross sections are normal (perpendicular) to the axis of the unrelated AME. See Figure 3-1.

3.57 SIZE, ACTUAL LOCAL
size, actual local: the actual value of any individual distance at any cross section of a feature of size. See Figure 3-1.

So, what is the meaning of this curved line, the Derived Median Line?

see sheet #6

3.57
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3.22

Figure 3-1

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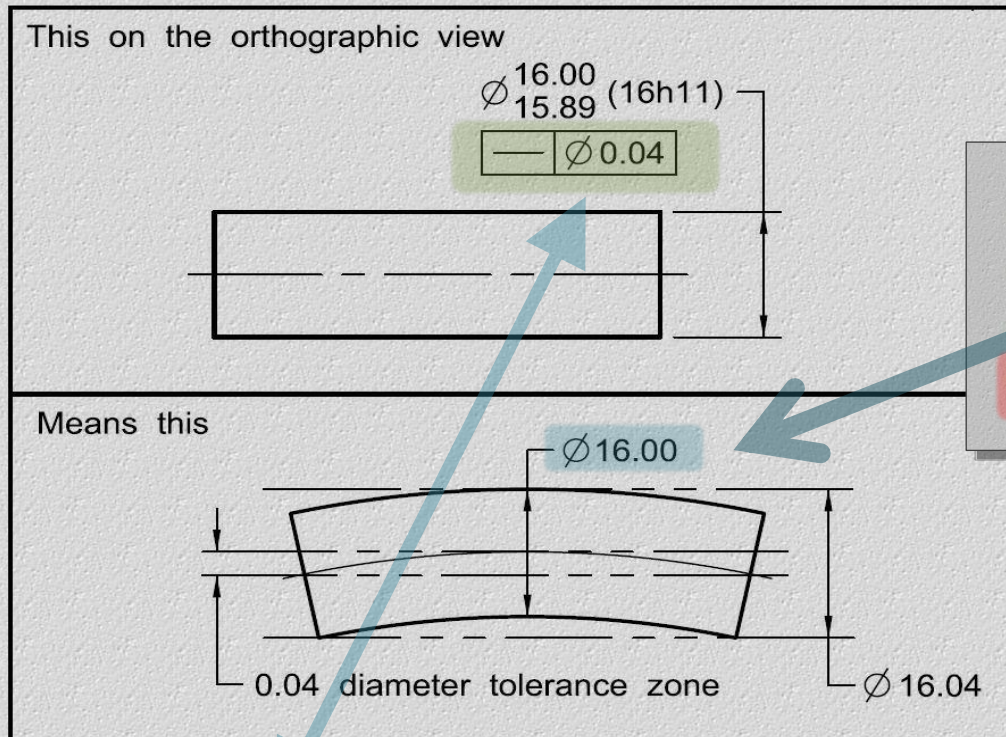
3.22 DERIVED MEDIAN LINE

derived median line: an imperfect (abstract) line formed by the **center points** of all cross sections of the feature. These cross sections are normal (perpendicular) to the axis of the unrelated AME. See [Figure 3-1](#).

"Center Points" means what? The centroid of all median points of each cross section?

(Five cross sections = five centroids)

Figure 8-3



3.57 SIZE, ACTUAL LOCAL

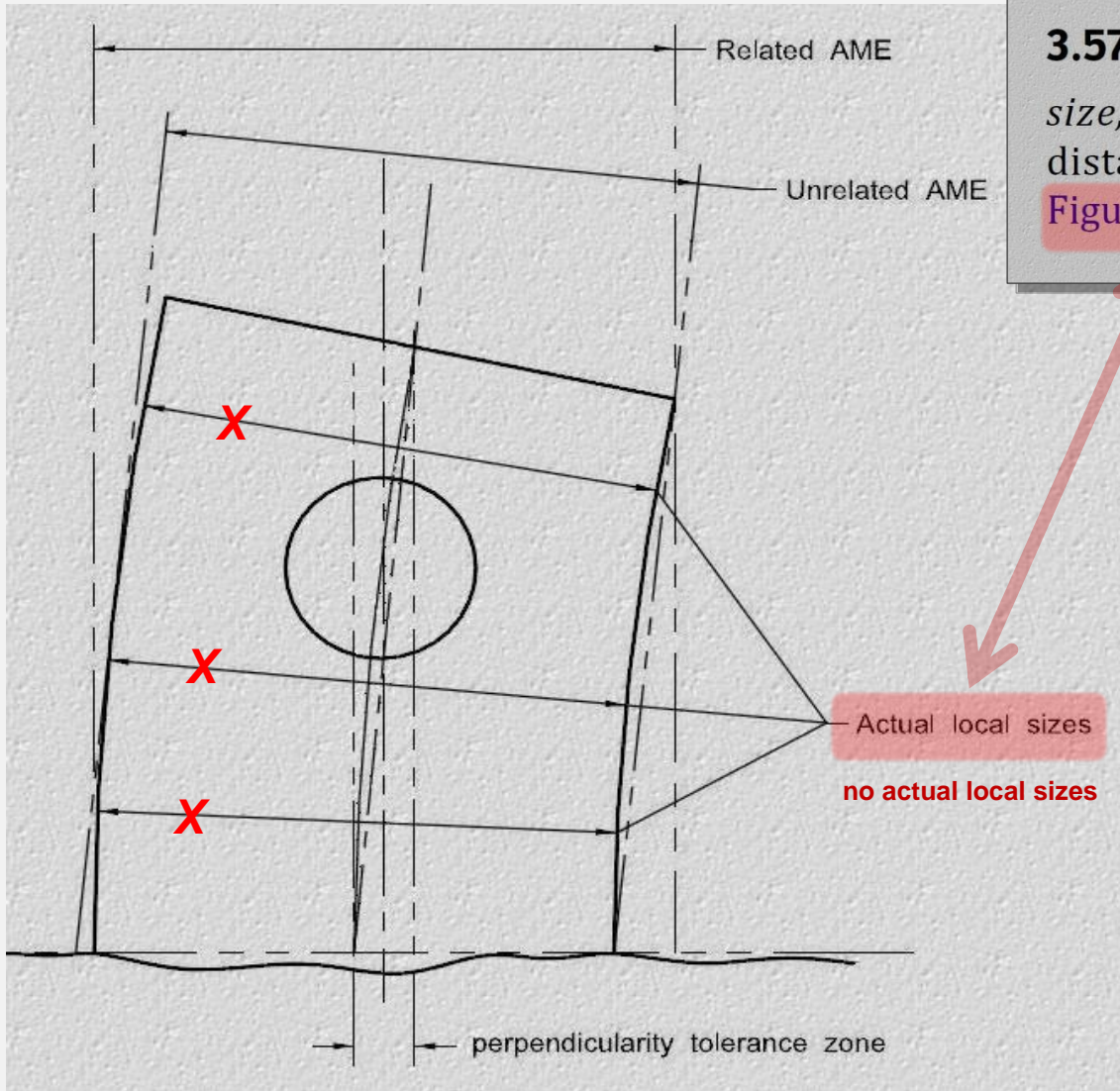
size, actual local: the actual value of any individual distance at any cross section of a feature of size. See Figure 3-1.

The **derived median line** of the feature shall be within a cylindrical tolerance zone of 0.04 diameter, regardless of the feature size. Each circular element of the surface shall be within the specified limits of size.

The actual local sizes are not illustrated in Figure 3-1.

Figure 3-1

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3.57 SIZE, ACTUAL LOCAL

size, actual local: the actual value of any individual distance at any cross section of a feature of size. See **Figure 3-1**.

Figure 3-1 Related and Unrelated AME

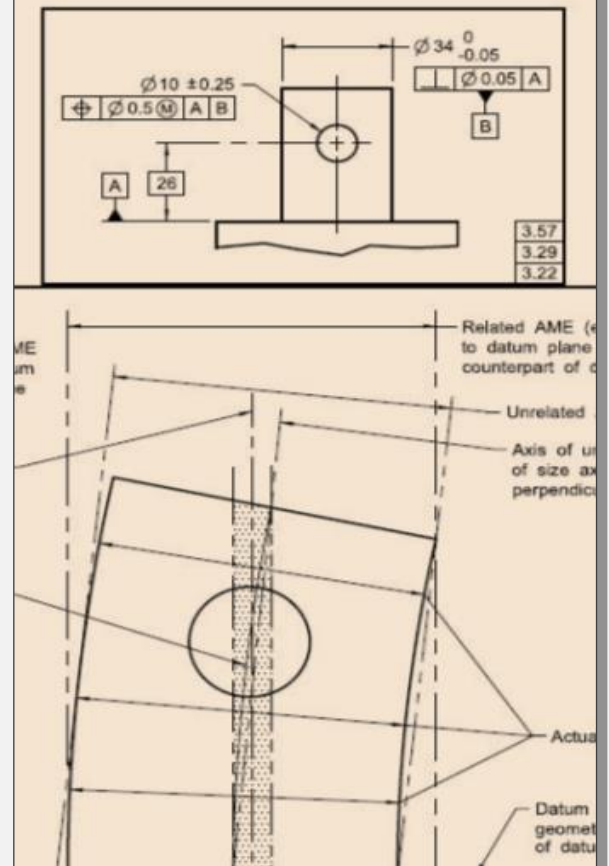
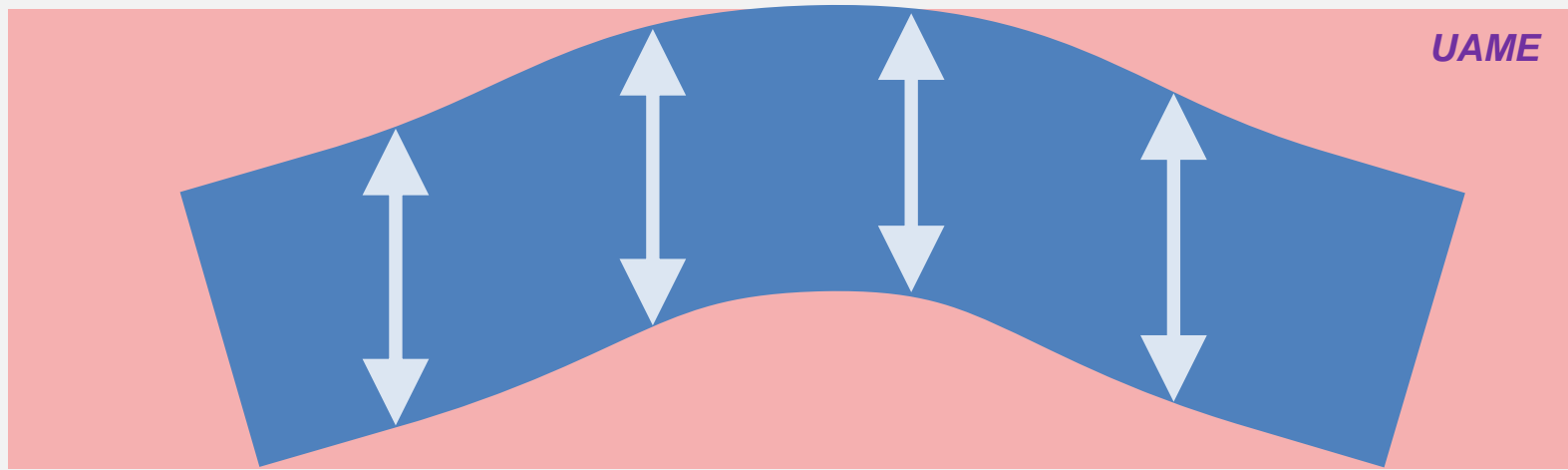
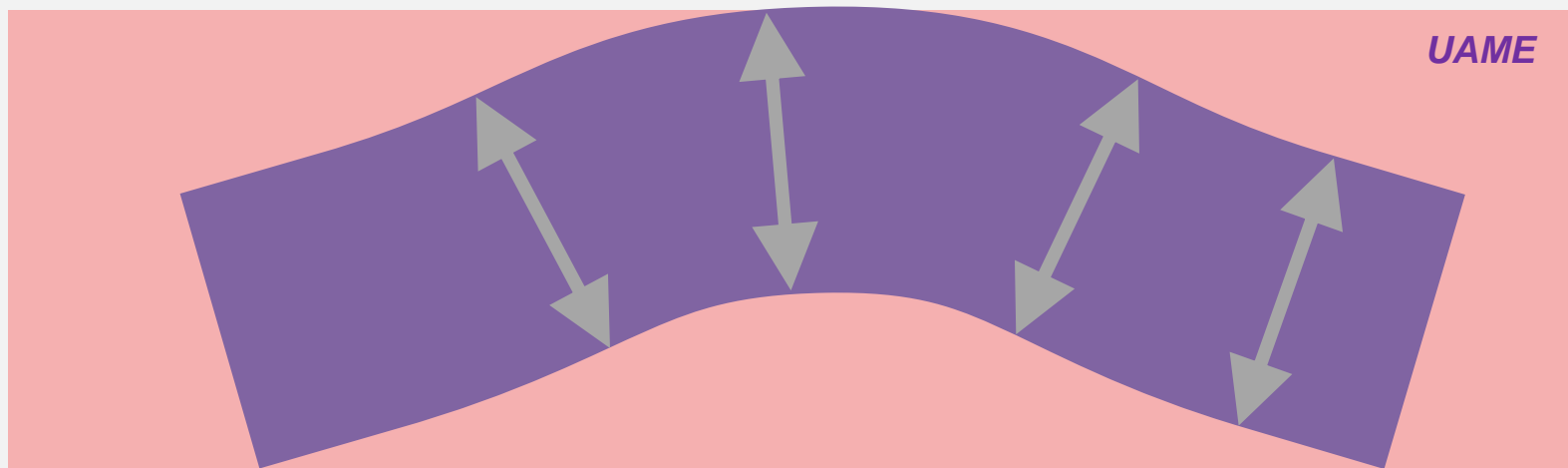


Figure 3-1

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**Local Actual Size:**

All distances are located on a cross section that is perpendicular to UAME.

**Local Actual Size:**

All distances are located on a cross section that is oriented according the local cylinder-gradient.

Figure 3-1.