

**Challenge Time
for
Materials Engineers
(4)**

An opportunity to test your knowledge

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Which option is not one of the phases of iron-carbon phase diagram?

A. α (alpha)

B. β (beta)

C. γ (gamma)

D. δ (delta)

Please think first and then go to the next page for the answer.

The correct answer is **B**

The first three letters of the Greek alphabet are alpha, beta, and gamma (α , β , γ), but there is no structure of iron called beta iron.

When the structure of iron was being discovered in the late 19th century, the magnetic transition in iron that occurs at 770 °C (1420 °F) caused scientists to theorize a structure of iron they called beta iron, which was later shown not to exist.

