EXERCISES

O, X and tandem arrangements

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1. To which rolling bearings do the different types of bearing arrangement refer?
a) Cylindrical roller bearing
b) Tapered roller bearing
c) Angular contact ball bearing
d) Axial deep groove ball bearing

2. What is the origin of the names of the different arrangements?
a) From the designation of the rolling bearings used
b) From the first letters of the surnames of the inventors of the arrangements
c) From the pressure lines through the contact angles
d) There are no particular naming conventions

3. What is the abbreviation for the tandem arrangement?
a) TT
b) DT
c) DB
d) TFT

4. What are the advantages of an O-arrangement?
a) It can absorb high radial loads
b) It can also absorb one-sided axial forces
c) It is possible to absorb one-sided radial forces
d) It can absorb axial forces from both directions

5. You can only fit angular contact ball bearings in the O arrangement.
a) Correct
b) Incorrect

6. How does an overlap of the rolling cone lines affect the bearing clearance?
a) It gets bigger
b) It becomes smaller
c) It remains unchanged
d) The rolling cone lines cannot overlap

7. Angular contact ball bearings can be ordered in both single and double row.
a) Correct
b) Incorrect

8. How do bearings in X arrangement differ from bearings in O arrangement?
a) They have a smaller span between the load application points
b) Only minor misalignments are possible
c) They have a lower moment stiffness
d) There is a higher tilt stiffness

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9. What is the possible temperature effect in bearings in X arrangement when there is a temperature difference between the inner and outer ring?

a) Reduction of the bearing clearance
b) Increase of the operating clearance
c) Increase of the bearing clearance
d) There is no temperature effect

10. Bearings in tandem arrangement are able to support larger axial loads in one direction.

a) Correct
b) Incorrect

Solution: 1. b; c; 2. c; 3. b; 4. d; 5. b; 6. b; 7. a; 8. a, c; 9. a; 10. a;