Claims

1. Reaction tube for preparing hydrogen cyanide comprising a cylindrical ceramic tube and a catalyst comprising platinum applied to the inner surface of the tube, ~~characterized in that~~ wherein
the reaction tube has fins on the inner surface which run in the longitudinal direction of the tube, extend into the interior space of the reaction tube and are coated with catalyst.

2. Reaction tube according to Claim 1, ~~characterized in that~~ wherein
the reaction tube has 2 to 6, preferably 3 or 4, fins.

3. Reaction tube according to Claim 1 or 2, ~~characterized in that~~ wherein
the fins extend into the interior space of the reaction tube by more than 0.1 times the inner diameter of the tube.

4. Reaction tube according to Claim 1 or 2, ~~characterized in that~~ wherein
the fins abut one another in the centre of the reaction tube and divide the interior space of the reaction tube into a plurality of chambers separated from one another.

5. Reaction tube according to any one of Claims 1 to 4, ~~characterized in that~~ wherein
the fins have a mean thickness which is 0.25 to 2.5 times the mean thickness of the wall of the reaction tube.

6. Reaction tube according to any one of Claims 1 to 5, ~~characterized in that~~ wherein
the thickness of the fins decreases with increasing distance from the inner surface of the reaction tube.

7. Reaction tube according to any one of Claims 1 to 6, ~~characterized in that~~ wherein
the reaction tube and the fins are composed of gas-tight sintered aluminium oxide or silicon carbide.

8. Use of a reaction tube according to any one of Claims 1 to 7 for preparing hydrogen cyanide.

9. Method for preparing hydrogen cyanide by reacting ammonia and at least one aliphatic hydrocarbon having 1 to 4 carbon atoms in the presence of a catalyst comprising platinum at a temperature of 1000 to 1400°C, ~~characterized in that~~ wherein
the reaction is carried out in at least one reaction tube according to any one of Claims 1 to 6.

10. Method according to Claim 9, ~~characterized in that~~ wherein
the hydrocarbons are composed of at least 90 vol% of methane.