CLAIMS

1. A riser reactor, comprising:
a cylindrical riser comprising an outer wall and an inner wall; at least one baffle affixed to the inner wall extending into the riser; and at least one distributor configured to inject methanol into the riser, wherein the at least one distributor extends through the at least one baffle and into a different radial location within the riser.

2. The riser reactor of claim 1, wherein the at least one baffle extends around the entire inner wall of the riser.

3. The riser reactor of claim 1, wherein the at least one distributor is angled from 30 degrees to 120 degrees relative to the inner wall.

4. The riser reactor of claim 1, further comprising additional distributors, wherein at least two of the distributors are located at two different axial locations within the riser.

5. The riser reactor of claim 1, further comprising at least two rows of baffles.

6. The riser reactor of claim 1, wherein the at least one baffle is arranged non-symmetrically around the inner wall of the riser.

7. The riser reactor of claim 1, wherein the at least one baffle covers substantially the entire circumference of the riser.

8. A riser reactor, comprising:
a cylindrical riser comprising an outer wall and an inner wall; at least one baffle affixed to the inner wall and extending into the riser wherein the at least one baffle is arranged non-symmetrically around the inner wall of the riser; and two distributors configured to inject a fluid into the riser, wherein at least one of said two distributors extends through said at least one baffle.

9. The riser reactor of claim 8, wherein the distributors extend through the at least one baffle and into a different radial location within the riser.

10. The riser reactor of claim 8, wherein at least one of the distributors is angled from 30 degrees to 120 degrees relative to the inner wall.

11. The riser reactor of claim 8, further comprising at least two rows of baffles.

12. A riser reactor, comprising:
a cylindrical riser comprising an outer wall and an inner wall; at least two baffles affixed to the inner wall and extending into the riser; and two distributors configured to inject methanol into the riser, wherein said at least two baffles are located at or below said two distributors.

13. The riser reactor of claim 12, wherein the distributors extend through the at least two baffles and into a different radial location within the riser.

14. The riser reactor of claim 12, wherein at least one of the distributors is angled from 30 degrees to 120 degrees relative to the inner wall of the riser.