WHAT IS CLAIMED IS:

1. A silicone tube structure comprising:

an extruded hollow body having an inner bore, the extruded hollow body having an inner diameter, an outer diameter, and a length of at least approximately 20 m;

wherein a standard deviation of the inner diameter is no greater than approximately 0.6% of an average inner diameter of the extruded hollow body over the length.

2. A method comprising:

receiving, by an extrusion system, a silicone material; and

forming, by the extrusion system, a silicone tube structure from the silicone material, the silicone tube structure comprising an extruded hollow body having an inner bore, the body having an inner diameter, an outer diameter, and a length of at least approximately 20 m, wherein a standard deviation of the inner diameter is no greater than approximately 0.6% of an average inner diameter of the extruded hollow body over the length.

3. The method as recited in claim 2, wherein forming the silicone tube structure includes:

extruding the silicone material to form an extruded member; and

curing the extruded member to form the silicone tube.

4. The method as recited in claims 2 or 3, wherein the silicone tube structure is extruded vertically.

5. The method as recited in claim 4, wherein the silicone material is extruded vertically in an upward direction.

6. The method as recited in any one of claims 2 to 5, wherein the extrusion system includes at least one curing apparatus.

7. The method as recited in claim 6, wherein the at least one curing apparatus includes an infrared (IR) oven.

8. The method of claim 7, wherein the IR oven has a peak wavelength less than about 4 microns.

9. The method as recited in any of claims 2-8, wherein the extrusion system includes a gear pump coupled to an extruder.

10. The method as recited in claim 9, wherein the extrusion system is operated at a suction pressure with a range of 500 to 2000 psi, and at a head pressure within a range of 1000 to 4000 psi.

11. The method as recited in claim 9, wherein gears of the gear pump have a double helix design.

12. The method as recited in any one of claims 2 to 11, wherein a speed of the extrusion system is at least approximately 2 m/min., at least approximately 22 m/min., at least approximately 30 m/min., at least approximately 40 m/min, or at least approximately 50 m/min.

13. The method as recited in claim 2, wherein the extrusion system includes an extruder having a die and a mandrel.

14. The method as recited in claim 13, wherein a ratio of a land length of the die to the wall thickness of the body is no greater than approximately 6:1, no greater than approximately 5:1, or no greater than approximately 4:1.

15. The method as recited in any of claims 2- 14, wherein the extrusion system is operated at a draw down % (DD%) within a range of about 5 to 13%, such as 5 to 10%, or 7 to 10%.

16. The method as recited in any one of claims 2-15, further comprising determining the outer diameter at a particular location by which the extruded hollow body passes during forming.

17. The method as recited in claim 16, wherein the outer diameter is determined using a laser sensor or an X-ray sensor.

18. The method as recited in claims 16 or 17, wherein the outer diameter at the particular location is determined at a pre-determined interval.

19. The method as recited in claim 18, wherein the pre-determined interval no greater than every 0.5 seconds, no greater than every 1.5 seconds, no greater than every 5 seconds, no greater than every 10 seconds, or no greater than every 20 seconds.

20. The method as recited in any one of claims 9-10, further comprising adjusting a suction pressure of the extruder system based on the outer diameter of the body, adjusting a speed of the extruder system based on the outer diameter at the particular point of the body, adjusting a temperature of one or more IR ovens of the extruder system based on the outer diameter at the particular point of the body, or any combination thereof.

21. The method as recited in any one of claims 2 to 20, further comprising measuring one or more dimensions of the silicone tube structure before postcuring of the silicone tube structure.

22. The silicone tube structure or method as recited in any one of the preceding claims, wherein the standard deviation of the inner diameter is no greater than approximately 0.5% of the average inner diameter of the extruded hollow body over the length, no greater than approximately 0.4% of the average inner diameter of the extruded hollow body over the length, no greater than approximately 0.2% of the average inner diameter of the extruded hollow body over the length, or no greater than

approximately 0.08% of the average inner diameter of the extruded hollow body over the length.

23. The silicone tube structure or method as recited in any one of the preceding claims, wherein the standard deviation of a wall thickness of the extruded hollow body is no greater than approximately 1.1% of an average wall thickness of the extruded hollow body over the length, no greater than approximately 0.8% of the average wall thickness of the extruded hollow body over the length, no greater than approximately 0.6% of the average wall thickness of the extruded hollow body over the length, no greater than approximately 0.4% of the average wall thickness of the extruded hollow body over the length, no greater than approximately 0.2% of the average wall thickness of the extruded hollow body over the length, or no greater than approximately 0.08% of the average wall thickness of the extruded hollow body over the length.

24. The silicone tube structure or method as recited in any one of the preceding claims, wherein a cross-section of the inner bore perpendicular to an axial direction of the body has a circular shape, a square shape, a triangular shape, or a rectangular shape.

25. The silicone tube structure or method as recited in any one of the preceding claims, wherein the length of the body is at least approximately 30 m, at least approximately 50 m, at least approximately 100 m, or at least approximately 125 m.

26. The silicon tube structure or method as recited in any one of the preceding claims, wherein the inner diameter of the body is at least approximately 2.0 mm, at least approximately 2.5 mm, or at least approximately 3.0 mm.

27. The silicon tube structure or method as recited in any one of the preceding claims, wherein the outer diameter of the body is at least approximately 4 mm, at least approximately 8 mm, or at least approximately 11 mm.

28. The silicone tube structure or method as recited in any one of the preceding claims, wherein the silicone tube comprises a polymer including a cyclic siloxane, a linear siloxane, a dimethylsiloxane, a diethylsiloxane, a diphenylsiloxane, a halosiloxane, or any combination thereof.

29. The silicone tube structure or method as recited in any one of the preceding claims, wherein a knit line is absent from a distal end of the body of the silicone tube and a proximal end of the body of the silicone tube.

30. The silicone tube structure or method as recited in any one of the preceding claims, wherein the silicone tube structure is cut into a number of silicone tubes.

31. The silicone tube structure or method as recited in claim 30, wherein the number of silicone tubes comprise at least a portion of a lot of tubes.

32. The silicone tube structure or method as recited in any one of the preceding claims, wherein the silicone tube structure comprises a plurality of lumen, each lumen of the plurality of lumen has a respective inner diameter, and the respective inner diameter of at least one lumen of the plurality of lumen has a standard deviation that is no greater than approximately 0.8% of an average inner diameter of the at least one lumen over the length.

33. A lot comprising a number of silicone tubes, each silicone tube including an extruded hollow body having an inner diameter, an outer diameter, and a length, wherein a standard deviation of the inner diameter of at least approximately 95% of the number of tubes is no greater than approximately 0.6% of an average inner diameter of all of the number of tubes.

34. The lot of claim 33, wherein the number of silicone tubes is at least approximately 10, at least approximately 45, at least approximately 110, or at least approximately 170.

35. The lot of any one of claims 33 to 34, wherein the length of each silicone tube is at least approximately 8 cm, at least approximately 16 cm, or at least approximately 24 cm.

36. The lot of any one of claims 33 to 35, wherein the standard deviation of the inner diameter of at least approximately 97% of the number of tubes is no greater than approximately 0.6% of the average inner diameter of all of the number of tubes, the standard deviation of the inner diameter of at least approximately 99% of the number of tubes is no greater than approximately 0.6% of the average inner diameter of all of the number of tubes, the standard deviation of the inner diameter of at least approximately 99.5% of the number of tubes is no greater than approximately 0.6% of the average inner diameter of all of the number of tubes, the standard deviation of the inner diameter of at least approximately 99.9% of the number of tubes is no greater than approximately 0.6% of the average inner diameter of all of the number of tubes, or the standard deviation of the inner diameter of at least approximately 99.99% of the number of tubes is no greater than approximately 0.8% of the average inner diameter of all of the number of tubes.

37. The lot of any one of claims 33 to 36, wherein, a standard deviation of a wall thickness of at least approximately 95% of the number of tubes is no greater than approximately 1.1% of an average wall thickness of all of the number of tubes, the standard deviation of the wall thickness of at least approximately 97% of the number of tubes is no greater than approximately 1.1% of the average wall thickness of all of the number of tubes, the standard deviation of the wall thickness of at least approximately 99% of the number of tubes is no greater than approximately 1.1% of the average wall thickness of all of the number of tubes, the standard deviation of the wall thickness of at least approximately 99.5% of the number of tubes is no greater than approximately 1.1% of the average wall thickness of all of the number of tubes, the standard deviation of the wall thickness of at least approximately 99.9% of the number of tubes is no greater than approximately 1.1% of the average wall thickness of all of the number of tubes, or the standard deviation of the wall thickness of at least approximately 99.99% of the number of tubes is no greater than approximately 1.1% of the average wall thickness of all of the number of tubes.

38. The lot of any one of claims 33 to 37, wherein one or more silicone tubes of the number of silicone tubes are formed from the silicone tube structure of any one of claims 1 to 45.

39. The silicone tube structure or method according to any of claims 1-32, wherein the extruded hollow body has a nominal diameter of at least about 2.0 mm, such as at least about 2.5 mm, such as at least about 3.0 mm, or about 2.0 to 25.0 mm, such as 2.0 to 20.0 mm, 2.5 to 20 mm, or 3.0 to 20 mm.

40. A method comprising:

providing a medical device comprising a pump and a silicone tube from the number of silicone tubes according to claim 30; and

dispensing fluid to a patient with the medical device.

41. An apparatus, comprising:

a silicone tube from the number of silicone tubes according to claim 30; and

a pump coupled to the tube to dispense fluid contained in the tube.

42. The apparatus of claim 41, wherein the pump comprises a medical device to provide the fluid to a patient.

43. The apparatus or method as recited in any one of claims 40-42, wherein the pump is a peristaltic pump.

44. The apparatus or method as recited in any one of claims 40-42, wherein the pump is an infusion pump, an affinity pump, or an enteral pump.

45. The apparatus or method as recited in any one of claims 40-44, wherein a flow rate of the fluid is at least approximately 0.1 mL/hr., at least approximately 100 mL/hr., at least approximately 400 mL/hr., or at least approximately 700 mL/hr.

46. The apparatus or method as recited in any one of claims 40-45, wherein a flow rate of the fluid is no greater than approximately 1500 mL/hr., no greater than approximately 1200 mL/hr., no greater than approximately 900 mL/hr., or no greater than approximately 500 mL/hr.

WHAT IS CLAIMED IS:

1. A silicone tube structure comprising:

an extruded hollow body having an inner bore, the extruded hollow body having an inner diameter, an outer diameter, and a length of at least approximately 20 m;

wherein a standard deviation of the inner diameter is no greater than approximately 0.6% of an average inner diameter of the extruded hollow body over the length.

2. A method comprising:

receiving, by an extrusion system, a silicone material; and

forming, by the extrusion system, a silicone tube structure from the silicone material, the silicone tube structure comprising an extruded hollow body having an inner bore, the body having an inner diameter, an outer diameter, and a length of at least approximately 20 m, wherein a standard deviation of the inner diameter is no greater than approximately 0.6% of an average inner diameter of the extruded hollow body over the length.

3. The method as recited in claim 2, wherein forming the silicone tube structure includes:

extruding the silicone material to form an extruded member; and

curing the extruded member to form the silicone tube.

4. The method as recited in claims 2 or 3, wherein the silicone tube structure is extruded vertically.

5. The method as recited in claim 2, wherein the extrusion system includes at least one curing apparatus.

6. The method as recited in claim 5, wherein the at least one curing apparatus includes an infrared (IR) oven.

7. The method as recited in claim 2, wherein the extrusion system includes a gear pump coupled to an extruder.

8. The method as recited in claim 7, wherein the extrusion system is operated at a suction pressure with a range of 500 to 2000 psi, and at a head pressure within a range of 1000 to 4000 psi.

9. The method as recited in claim 2, wherein the extrusion system is operated at a draw down % (DD%) within a range of about 5 to 13%, such as 5 to 10%, or 7 to 10%.

10. The method as recited in claim 2, further comprising measuring one or more dimensions of the silicone tube structure before postcuring of the silicone tube structure.

11. The silicone tube structure or method as recited in claims 1 or 2, wherein the standard deviation of a wall thickness of the extruded hollow body is no greater than approximately 1.1% of an average wall thickness of the extruded hollow body over the length, no greater than approximately 0.8% of the average wall thickness of the extruded hollow body over the length, no greater than approximately 0.6% of the average wall thickness of the extruded hollow body over the length, no greater than approximately 0.4% of the average wall thickness of the extruded hollow body over the length, no greater than approximately 0.2% of the average wall thickness of the extruded hollow body over the length, or no greater than approximately 0.08% of the average wall thickness of the extruded hollow body over the length.

12. The silicone tube structure or method as recited in claims 1 or 2, wherein the silicone tube structure is cut into a number of silicone tubes.

13. The silicone tube structure or method as recited in claims 1 or 2, wherein the number of silicone tubes comprise at least a portion of a lot of tubes.

14. The silicone tube structure or method as recited in claims 1 or 2, wherein the silicone tube structure comprises a plurality of lumen, each lumen of the plurality of lumen has a respective inner diameter, and the respective inner diameter of at least one

lumen of the plurality of lumen has a standard deviation that is no greater than approximately 0.8% of an average inner diameter of the at least one lumen over the length.

15. An apparatus, comprising:

a silicone tube from the number of silicone tubes according to claim 12; and

a pump coupled to the tube to dispense fluid contained in the tube.