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a driver gear engaging said driven gear and connected to drive means external to the evacuable portion of the simulator.

4. In a simulator as defined in claim 1 an improved support wheel having a plurality of support sites each for one of said mounting members;

and wherein each of said mounting members comprises;

a plate mounted for rotary motion within the plane of the support wheel and including drive engaging means for effecting rotary motion of said plate;

a plurality of specimen receiving locations in a circular pattern on one face of said plate, each of said locations including a specimen securing member, a thermocouple element, and means for urging the thermocouple element into contact with a specimen in the respective receiving location; and

a thermocouple lead wire enclosure on said plate to accommodate a continuous length of wire sufficient to permit limited rotary motion of said plate without binding of the wire.

5. In a simulator as defined in claim 1 an improved transport mechanism wherein:

said support wheel comprises a support member having a plurality of arms, a loop at the end of each of said arms; and

further comprising a plurality of said specimen

mounting members, one located at the end of each of the arms of the support member, each of said specimen mounting members comprising:

a low friction bearing mounted in said loop;

a plate mounted in said bearing for rotary motion in the plane of the support member;

a driven gear at a periphery of said plate;

a plurality of specimen receiving locations on one face of said plate, each of said locations including means for holding a specimen in place, thermocouple adapted for contacting a specimen in said location, and means for passing leads from the thermocouple to a periphery of said plate; and

an enclosure on the opposite side of said plate from said specimen receiving locations, said enclosure having a plurality of openings on the periphery thereof for receiving thermocouple lead wires and having sufficient internal volume to accommodate a continuous length of thermocouple lead wire in a loose circumferential array to permit limited rotary motion of said plate without binding of the wire; and said plate further comprising;

an unobstructed rear portion opposite said specimen receiving locations for contact with a heat exchanger.

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