Useful.—Crew and passengers, oil and fuel, ballast other than emergency, ordnance, and portable equipment.

Nose heavy.—Condition of an airship which when at rest in still air trims with its axis inclined down by the bow. The term "bow heavy" is preferred to "nose heavy" in describing airships.

Oscillation, stable.—Oscillation whose amplitude does not increase.

Oscillation, unstable.—Oscillation whose amplitude increases continuously until an attitude is reached from which there is no tendency to return toward the original attitude, the motion becoming a steady divergence.

Performance characteristics (airship).—In general:

Maximum speed at various altitudes.

Maximum altitude attainable with definite weight relations and ballonet volume (if fitted).

Endurance at full and half power.

Static ceiling.

Dynamic lift under specified conditions.

Pitch of propeller:

Effective.—Distance which aircraft advances along its flight path for one revolution of propeller. Its symbol is p_e.

Geometrical.—Distance which an element of a propeller would advance in one revolution if it were moving along a helix of slope equal to its blade angle.

Mean geometrical.—Mean of the geometrical pitches of the several elements. Its symbol is p_g.

Standard.—Geometrical pitch taken at two-thirds of the radius. Also called "nominal pitch." Its symbol is p_s.

Zero thrust.—Distance which propeller would have to advance in one revolution in order that there might be no thrust. Also called "experimental mean pitch." Its symbol is p_v.

Zero torque.—Distance which propeller would have to advance in one revolution in order that the torque might be zero. Its symbol is p_o.

Pitch ratio.—Ratio of the pitch (geometrical unless otherwise stated) to the diameter p/D.

Pitch speed.—Product of mean geometrical pitch by number of revolutions of propeller in unit time, that is, the speed aircraft would make if there were no slip.

Propeller area, projected.—Total area in the plane perpendicular to propeller shaft swept by propeller, except portion covered by the boss and that swept by root of the blade. This portion is usually taken as extending 0.2 of maximum radius from axis of the shaft.