$$(L' a_{(1)})^2 = (\rho' / K\gamma)^{1/2} r^{-(L+w+1)/2}$$

$$\times \exp\left\{\frac{\beta^2}{4}(2M + Nr^2)\right\} \cdot [\beta^2\{Rr^{L+1+w}$$

$$- S\beta^2 r^{L+2+w} - T\beta^4 r^{L+3+w}\} + K_1] \quad . \qquad (9)$$

DISCUSSION

Equation (8) representing the propagation of strong diverging plane and cylindrical shock waves contains two types of terms involving the propagation distance r one with positive power and the other with negative power of r. Therefore, the shock velocity initially decrease as the shock advances and attains a minimum value for certain propagation distance $'U\text{min}$. This agrees with earlier results[6,7]. Chaturani[4] has, however, not observed the increasing trend of shock velocity with propagation distance. Obviously this is due to the limitation of the power series form of representation of the flow variables i.e. the solutions are inadequate for large values of r. The occurrence of exponential term in the present expression permits the parameters governing the propagation to attain theoretically infinite values.

Finally, the expressions for the pressure, the density and the particle velocity immediately behind the shock can be written as

$$P = \frac{\chi(\xi)}{\gamma}\rho' r^{-(L+w)} \exp\left\{\frac{\beta^2}{2}(2Mr + Nr^2)\right\}$$

$$\times [\beta^2\{Rr^{L+1+w} \quad S\beta^2 r^{L+2+w}$$

$$- T\beta^4 r^{L+3+w}\} + K_1]^{1/2}$$

$$+ A'K - 1.5A'\beta^2\gamma p'(1+\eta)r,$$

$$p = \rho' \xi r^{-w} \qquad (10)$$

$$\text{and, } u = \frac{\xi - 1}{\xi} r^{-L/2} \exp\left\{\frac{\beta^2}{4}(2Mr + Nr^2)\right\}$$

$$\times [\beta^2\{Rr^{L+1+w} - S\beta^2 r^{L+2+w}$$

$$- T\beta^4 r^{L+3+w}] + K_1]^{1/2}$$

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NEWS

ORGANIC COMPOUNDS ACCUMULATING SO- LAR ENERGY

Organic compounds to accumulate solar energy and supply it at the will of the experimenter have been developed by the staff members of the Institute of Chemistry of the Bashkirian branch of the USSR Academy of Sciences. The products of petrochemical synthesis make the basis of these substances. Under the influence of solar light, chemical transformations take place in them resulting in a new product which can keep the accumulated heat. Prof. Genrikh Tolstikov, one of the authors of this project, said that one kilogram of such product can accumulate 300 kilo-calories sufficient to heat a few dozen litres of water to the boiling point. In order to release thermal energy, it is necessary to affect the compound with a special catalyst. If needed, the substance-accumulator can be charged from solar rays practically for an unlimited number of times.

It is hoped that in future the new compounds will replace portable power stations at the places which are far from energy sources. (*Soviet features*, Vol. XXVI, No. 4, p. 5, 1987; Information Department, USSR Embassy in India, P.B. No. 241, Barakhamba Road, New Delhi 110 001).