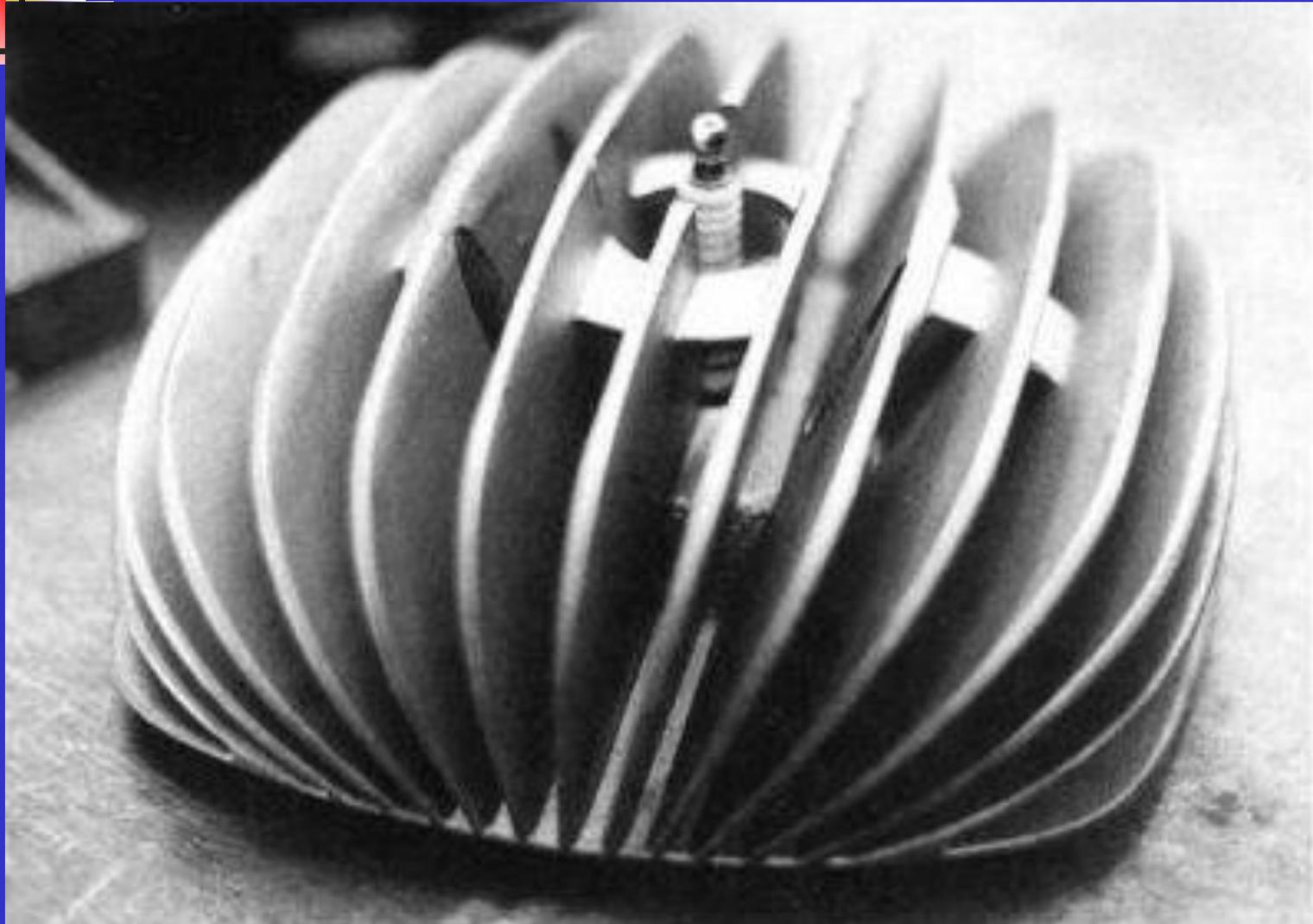


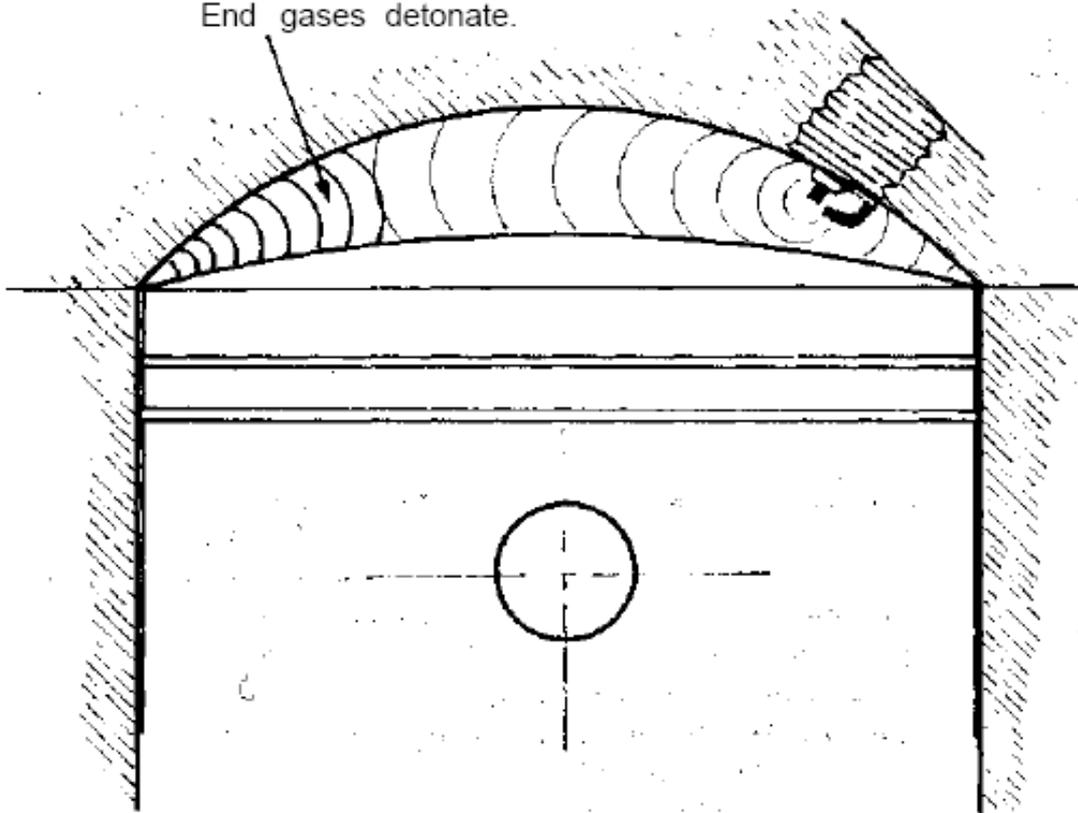
THE CYLINDER HEAD



PENEMPATAN BUSI

Quiescent chamber with offset spark plug.

End gases detonate.



- **Cylinder head type OFFSET SPARK PLUG** memungkinkan timbul knocking.
- Ini disebabkan penyebaran api pada ruang bakar tidak merata.
- Sebagian gas yang jaraknya jauh dari busi akan terbakar dengan sendiri karena terdesak gas pembakaran.

BUSI TERPUSAT

Squish chamber with central spark plug.

Ignition flame advances smoothly.

Squish band.

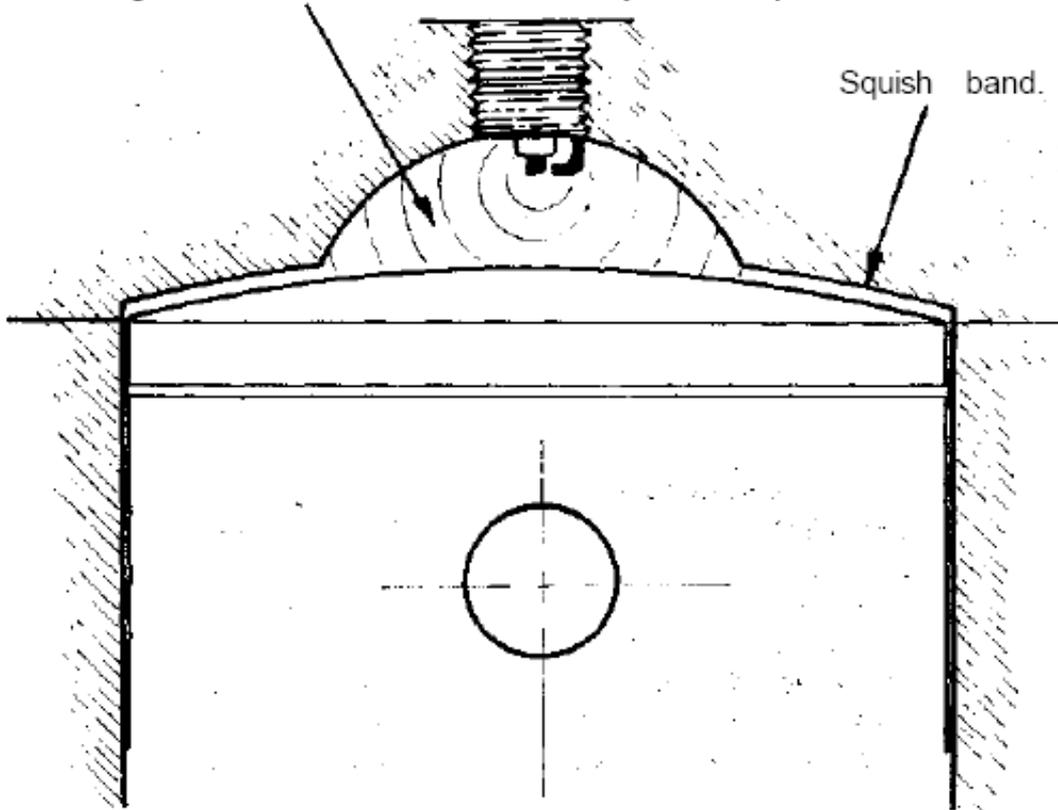


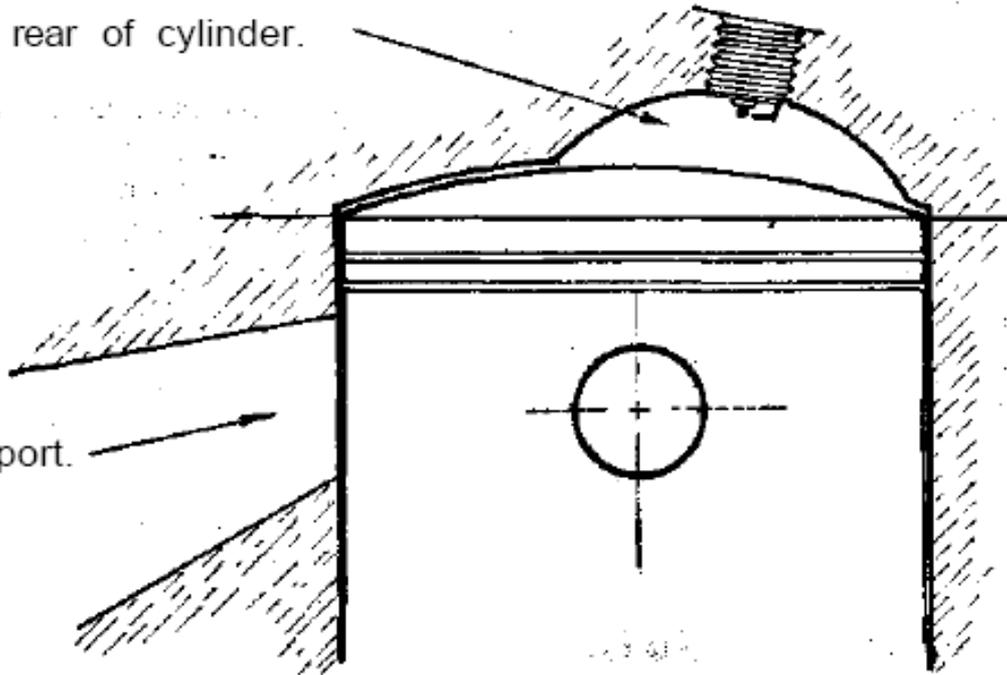
Fig. 2.1 Squish chamber promotes good combustion.

- Pada type central spark plug, gas kompresi dipusatkan pada ruangan yang diperkecil.
- Ini memungkinkan untuk membakar gas baru dengan cepat dan serempak.
- Hasilnya, penyebaran api lebih cepat dan merata
- Gejala knocking dapat dicegah

BUSI OFFSET DENGAN SQUISH

Combustion chamber offset to rear of cylinder.

Exhaust port.



Model ini digunakan pada mesin mesin spesial (vespa/ v 75, FR, dll)

Fig. 2.2 Offset squish type combustion chamber.



Menaikkan tenaga

- Jika diinginkan tenaga yang besar tanpa timbul knocking, maka hal yang perlu diperhatikan adalah menjaga toleransi jarak antara kepala piston dengan kepala silinder/ squish band (graham bell)

TABLE 2.1 Minimum squish clearances

| Cylinder size (cc) | Clearance (mm) |
|---------------------------|-----------------------|
| 50-80 | 0.6-0.8 |
| 100-125 | 0.7-0.9 |
| 175-250 | 1.0-1.4 |
| 300-500 | 1.1-1.5 |

Mengukur clearance squish

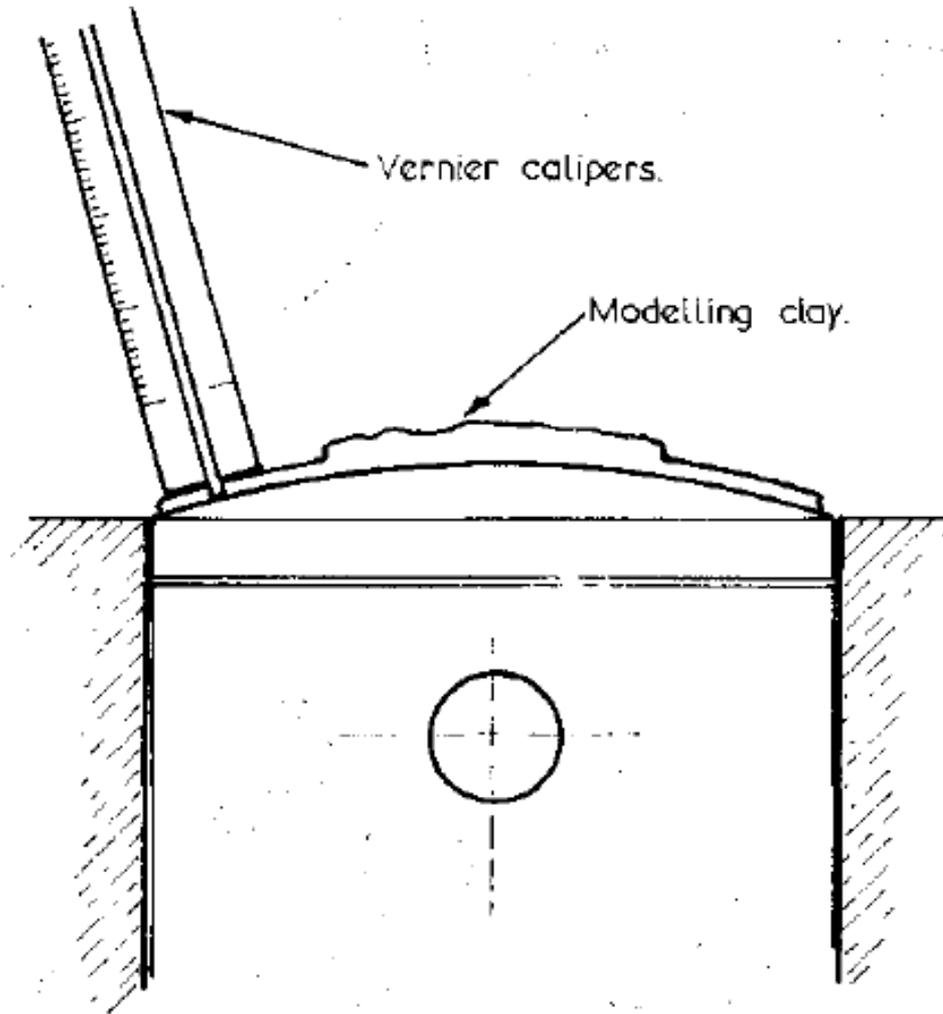


Fig. 2.3 Measuring the squish clearance.

MODIFIKASI SQUISH BAND

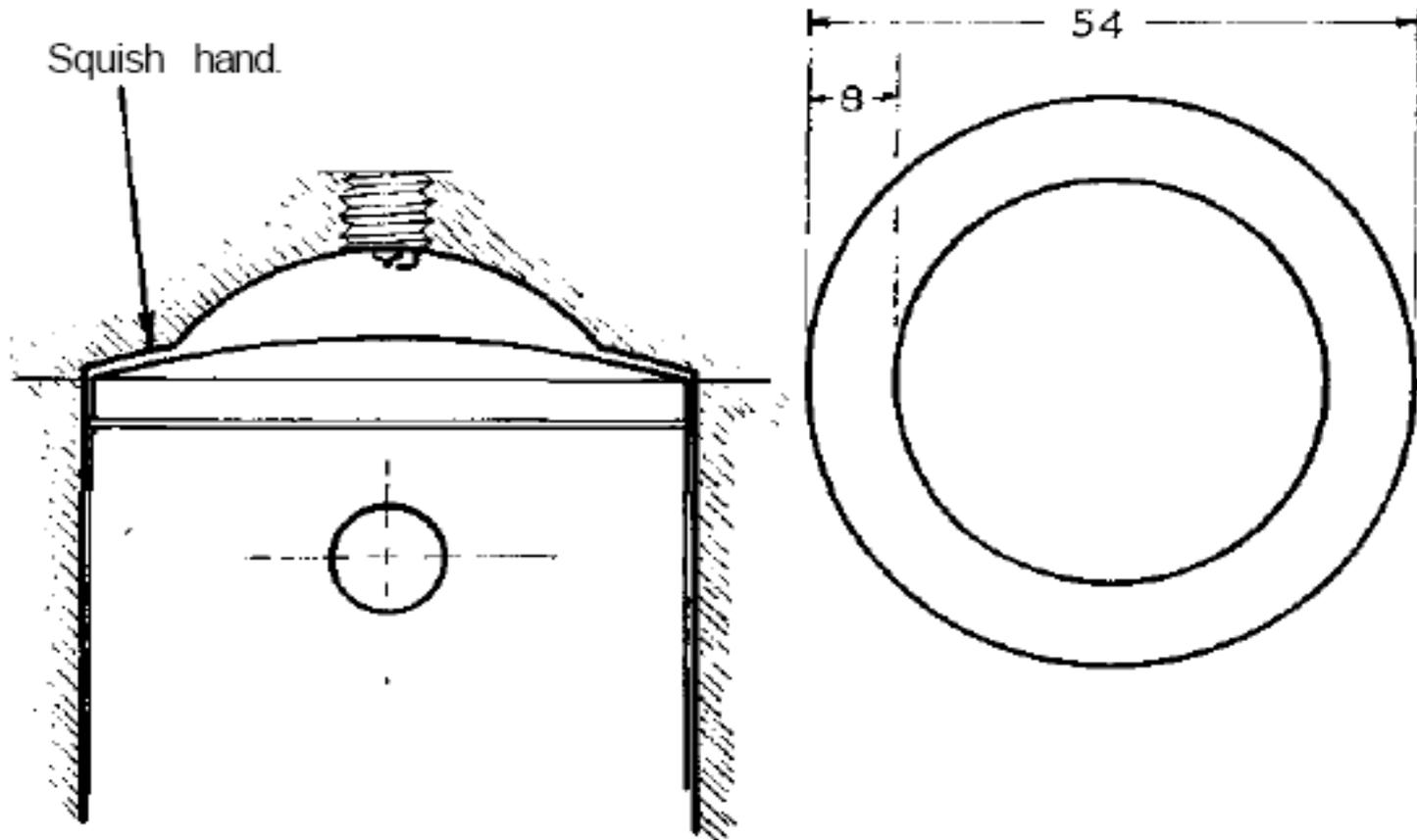


Fig. 2.4 A 50% squish band.

MEMBUAT MODEL RUANG BAKAR

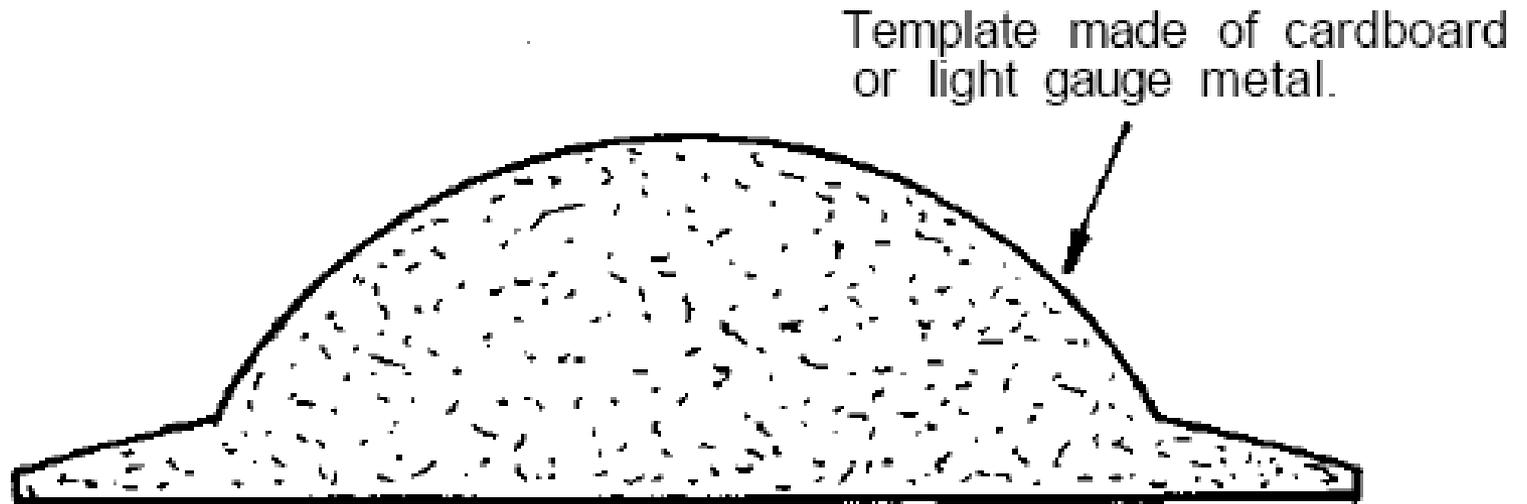
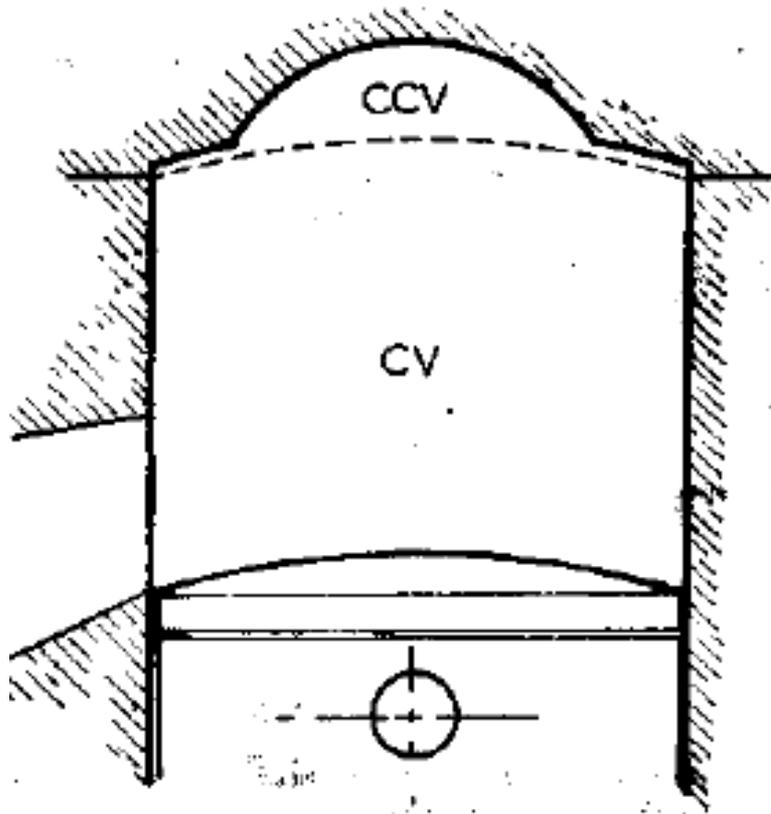


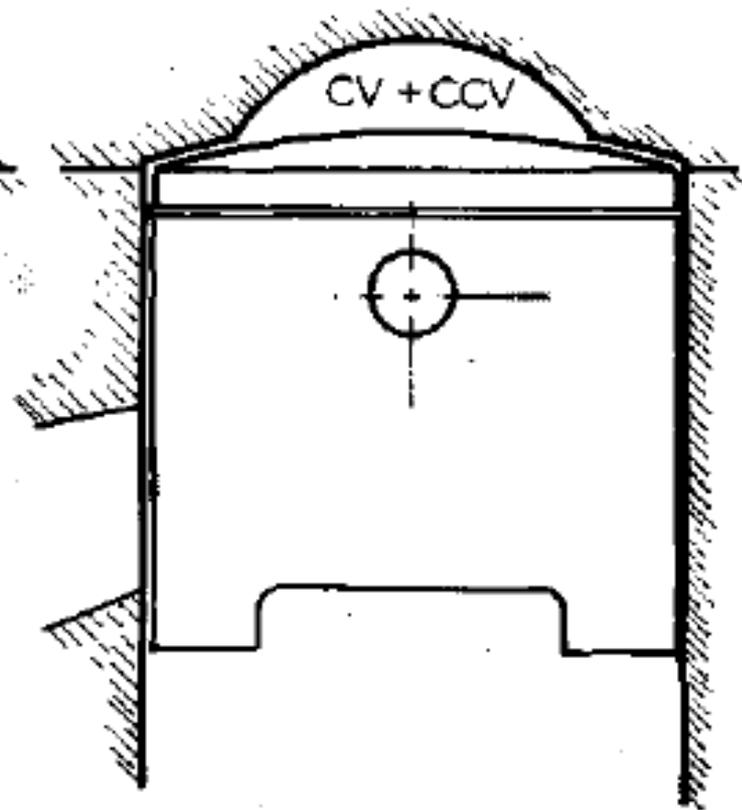
Fig. 2 .5 Combustion chamber template.

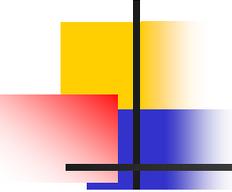
COMPRESSION RATIO

Piston at B.D.C.



Piston at T.D.C.





RASIO KOMPRESI IJIN

TABLE 2.2 **Permissible compression ratio**

| Cylinder size (cc) | Fuel type | | | |
|--------------------|-------------------|----------------------|----------------------|-----------------|
| | <i>700 Octane</i> | <i>100/130 Avgas</i> | <i>115/145 Avgas</i> | <i>Methanol</i> |
| 50-80 | 15.5:1 | 16:1 | 17:1 | 19:1 |
| 100-125 | 14.3:1 | 15:1 | 15.7:1 | 18:1 |
| 175 | 13.5:1 | 14:1 | 14.7:1 | 16.5:1 |
| 250 | 12.5:1 | 13:1 | 14:1 | 15.7:1 |
| 350 | 12.2:1 | 12.5:1 | 13:1 | 15:1 |
| 500 | 11.8:1 | 12:1 | 13:1 | 15:1 |



- DISCUSSION
