PFold=

==0.7

Qold= VI sin(cos-1(PFold)

= 2202sin(cos-1(0.7)

= 314.2228 VAR

Inew=

=

= 1.44 A

Qnew= VInew sin(cos-1(PFnew)

= 2201.44sin(cos-1(0.97)

= 77.192 VAR

C=

== 15.588 μF.

== =110A

Since Z= R+jX

Thus;

R= PFold

= 110 0.7= 77 Ω

X= sin (cos -1(PFold))

= 1100.714= 78.55 Ω

L =

= = 250.05 mH