A Numerical Study of the Flow around Sphere
For Different Reynolds Numbers

مكان النشر : **Maritime Scientific Research Journal (MSRJ)**

تاريخ الإرسال للنشر: 30/12/2010 تاريخ القبول للنشر: 18/4/2011 تاريخ النشر: 7/2011

النسبة المئوية لجهد الباحث فى إعداد البحث (إذا كان البحث مشتركاً): التوقيع:

•ترفق نسخة البحث المنشور مأخوذة من المجلة العلمية أو مجلد المؤتمر مباشرة.

ملخص البحث :

The flow, around a stationary sphere, is investigated numerically at Reynolds number (R_e) = 300 and 10000 based on the sphere diameter (D) and the free stream velocity. The diameter of the computational fluid domain around the sphere is *29D*. The sphere drag coefficient (C_D), was calculated in the current study at the two (R_e) different grids were investigated in this study, where the unstructured tetrahedral mesh elements were used for meshing both the sphere and its computational domain. Various turbulence models were used in this study as k-epsilon (k-ε), k-omega ($k-\omega$) and large eddy simulation (LES). The numerical results were compared with the available experimental results