



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكرو فيلم

بسم الله الرحمن الرحيم



MONA MAGHRABY



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التوثيق الإلكتروني والميكروفيلم



شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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DEVELOPMENT OF REGIME EQUATIONS FOR THE DESIGN OF EGYPTIAN CANALS

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(B.Sc. in Civil Engineering, 2012)

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List Of Symbols

Symbol	Definition	Dimensions	units
A	Cross-section Area	$[L^2]$	m^2
B	Bed width	$[L]$	m
C	Chezy coefficient	$[L^{1/2}.T]$	$m^{1/2}.s$
d_{50}	median size of sediment particle	$[L]$	mm
f	Lacey silt factor	$[L.T^2]$	m/s^2
F_b	Bed factor	$[L.T^2]$	m/s^2
Fr	Froude number	-----	-----
F_s	Side factor	$[L^2.T^{-3}]$	m^2/s^3
g	gravitational acceleration	$[L.T^{-2}]$	m/s^{-2}
n	Manning's roughness coefficient	$[L^{1/6}]$	$m^{1/6}$
p	wetted perimeter of the water cross-section	$[L]$	m
Q	discharge	$[L^3.T^{-1}]$	m^3/s
R	hydraulic radius, $(R = A/P)$ (m)	$[L]$	m
S	Water surface slope	-----	cm/km
T_w	Top width (width at the water surface)	$[L]$	m
V	mean flow velocity	$[L.T^{-1}]$	m/s
Y	mean flow depth	$[L]$	m
ρ	Density of water	$[M.L^{-3}]$	Kg/m^3
μ	Dynamic viscosity	$[M.L^{-1}.T^{-1}]$	$Kg/m.s$

Abbreviations

CMRI	Channel Maintenance Research Institute
GPS	global positioning system
HAD	High Aswan dam
NWRC	National Water Research Center
P.P.M	Parts per million
SPSS	statistical package for social science