NO:012

NOKTASAL PROJE

Noktasal Proje Mühendislik Danışmanlık
İnşaat Mimarlık Eğitim San. ve Tic. Ltd. Şti.
Tarih [2019-04-26   ]
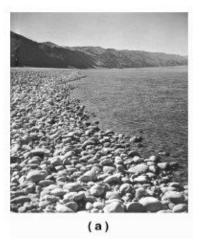Belge No [NB-012   ]

MANNİNG PRİZLÜLÜK KATSAYISI

Manning Equation

Material	n
Metals	
Steel	0.012
Cast iron	0.013
Corrugated metal	0.025
Non-metals	
Lucite	0.009
Glass	0.010
Cement	0.011
Concrete	0.013
Wood	0.012
Clay	0.013
Brickwork	0.013
Gunite	0.019
Masonary	0.025
Rock cuts	0.035
Natural streams	
Clean and straight	0.030
Bottom: gravel, cobbles and boulders	0.040
Bottom: cobbles with large boulders	0.050

*Compiled from tables presented by Chow [1959].

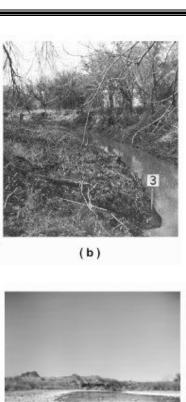Photographs for typical Manning n (After Barnes, [1967])

a. n = 0.024 (Columbia River at Vernita, Washington): The channel bottom consists of slime-covered cobbles and gravel, the steep left bank composed of cemented cobbles and gravel, and the right bank consists of cobbles set in gravel.

b. n = 0.030 (Salt Creek at Roca, Nebraska): The bottom consists of sand and clay; the banks are smooth and free of vegetation.

c. n = 0.032 (Salt River below StewartMountain Dam, Arizona): The bottom and banks consist of smooth 0.15-m diameter cobbles, with few 0.45-m diameter boulders.

d. n = 0.036 (West Fork Bitterroot River near Conner, Montana): The bottom is gravel and boulders, d50 = 1.72m; left bank has overhanging bushes and the right bank has trees.
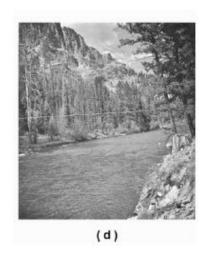
e. n = 0.041 (Middle Fork Flathead River near Essex, Montana): The bottom consists of boulders, d50 = 1.4 m; banks are composed of gravel and boulders and have trees and brushes.

f. n = 0.049 (Deep River at Ramseur, North Carolina): The bottom is mostly coarse sand and contains some gravel; the banks are fairly steep and have underbrush and trees.

g. n = 0.050 (Clear Creek near Golden, Colorado): The bottom and banks are composed of 0.7-m diameter angular boulders.

h. n = 0.060 (Rock Creek Canal near Darby, Montana): The bottom and banks consists of boulders d50 = 2.1 m.

i. n = 0.070 (Pond Creek near Loisville, Kentucky): The bottom is fine sand and silt; the banks are irregular with heavy growth of trees.

j. n = 0.075 (Rock Creek near Darby,Montana): The bottom consists of boulders, d50 = 2.2 m; the banks are composed of boulders and have brush and trees.

(a)

MANNİNG PRİZLÜLÜK KATSAYISI

(b)

(e)

(c)

(f)

(d)

(g)

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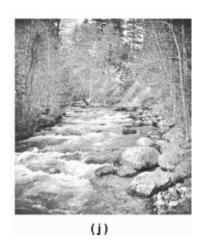Noktasal Proje Mühendislik Danışmanlık
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(i)

(h)

(j)

Channel	Type	n Depth Range		
		(0-150 mm)	(150-600 mm)	(>600 mm)
Rigid	Concrete	0.015	0.013	0.013
	Grouted Riprap	0.040	0.030	0.028
	Stone Masonry	0.042	0.032	0.030
	Soil Cement	0.025	0.022	0.020
	Asphalt	0.018	0.016	0.016
Unlined	Bare Soil	0.023	0.020	0.020
	Rock Cut	0.045	0.035	0.025
Temporary	Woven Paper Net	0.016	0.015	0.015
	Jute Net	0.028	0.022	0.019
	Fiberglass Roving	0.028	0.021	0.019
	Straw with Net	0.065	0.033	0.025
	Curled Wood Mat	0.066	0.035	0.028
	Synthetic Mat	0.036	0.025	0.021
Gravel Riprap	25mm D50	0.044	0.033	0.030
	50 mm D50	0.066	0.041	0.034
Rock Riprap	150 mm D50	0.104	0.069	0.035
	300 mm D50	–	0.078	0.040