This document explains the term "nominal capacity" in terms of nominal battery capacity, Ah (Amps · Hour).

## **Definitions:**

## FIM rule:

2.7.9.5 Battery: The Battery may be replaced. If replaced, its nominal capacity must be equal to or higher than the Homologated type.

## Ah:

An amp hour (Ah) is a rating usually found on deep cycle batteries. If a battery is rated at 6 amp hours it should deliver 1 amps for 6 hours, 2 amps for 3 hours, 6 amps for 1 hour etc.

## Nominal capacity:

The nominal capacity of a battery is rated as: How many amps do you need to discharge the battery to its maximum discharge voltage in exactly one hour.

As explained in the definitions a battery with a nominal capacity of 6 Ah should deliver at least 6 amps for one hour.

The confusion starts as lead/Acid battery manufacturers uses 20 hour ratings on their label and not the nominal capacity. This means that for example a 6 Ah battery can be discharged with a load of 0,3 amps for 20 hour. So the 20 hour capacity is 20(hour) \* 0,3 (amps) = 6 Ah.

If you discharge the same 6 Ah battery with 2 Amps you can only discharge it for about 40 minutes: capacity (Ah) = (40 min. / 60 min.) \* 2 Amps = 1.33 Ah

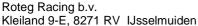
Nominal capacity Yuasa YTZ7S battery: (discharge time at 6 Amps discharge current = 11 minutes) capacity (Ah) = (11 min. / 60 min.) \* 6 Amps = 1,1 Ah

Battery used for testing:

Brand: Yuasa Type: YTZ7S Capacity: 6 Test conditions:

Minimum discharge Voltage: 12 Volt Maximum charge current: 0.6 Amps Maximum charge voltage: 13.8 Volt

Ambient temperature: 20 °C



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