The stb-nomencl package*

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Abstract

Simple utility to set a nomenclature or list of symbols for Stellenbosch theses.

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*This document corresponds to stb-nomencl v1.0, dated 2023/01/20.

1 stb-nomencl

1.1 Introduction

The stb-nomencl package is a very simple utility to set a nomenclature or list of symbols. There are more sophisticated packages available such as nomenclature. The package is loaded in the preamble of the document with

```
\usepackage{stb-nomencl}
```

1.2 Macros

Nomenclature environment

The package provides the `Nomencl` list environment to typeset lists of symbols.

```
\begin{Nomencl}[⟨Label width⟩]
   ⟨Nomenclature entries⟩
\end{Nomencl}
```

The optional argument (valid TEX length) can be used to adjust the label width.

Headings

Headings can be set with the `\NomGroup` command.

```
\NomGroup{⟨Heading⟩}
```

Lines with units declarations

Items with units declarations can be set with the `\UnitLine` command.

```
\UnitLine[⟨unit width⟩]{⟨description⟩}{⟨unit⟩}
```

The unit is set in math mode with upright roman font. The default width of the unit label can be changed with the `\UnitLabelWdth` length

```
\setlength{\UnitLabelWdth}{2.5cm}
```

The format of the unit label can be changed by redefining the `\UnitLabel` macro. For example if you are using the siunitx package to format the units:

```
\usepackage{siunitx}
\sisetup{output-decimal-marker = {.} ,
         group-separator       = {\,},
         number-unit-product   = {\,},
         inter-unit-product    = {{\cdot}},
         exponent-product      = {{\times}},
         separate-uncertainty  = true}

\usepackage{stb-nomencl}
\renewcommand*{\UnitLabel}[1]{~[\,\unit{#1}\,]}
```

1.3 Example of usage

An example of the input of a list of symbols is

```
\begin{Nomencl}[2em]
\NomGroup{Constants}
   \item[$L_0 = $]        3.0\,m

\NomGroup{Variables}
   \item[$\mathit{Re}_\mathrm{\,D}$]
                      Reynolds number (diameter)
   \item[$x$]         Coordinate
   \item[$a$]         Acceleration   \\
   \item[$\theta$]    Rotation angle
   \item[$\tau$]      Moment

\NomGroup{Variables with units}
   \item[$\mathit{Re}_\mathrm{\,D}$]
                      \UnitLine{Reynolds number (diameter)}{-}
   \item[$x$]         \UnitLine{Coordinate                }{m}
   \item[$a$]         \UnitLine{Acceleration              }{m/s^2}\\
   \item[$\theta$]    \UnitLine{Rotation angle            }{rad}
   \item[$\tau$]      \UnitLine{Moment                    }{N\cdot m}
\end{Nomencl}
```

Constants

$L_0 =$ 3.0 m

Variables

Re_D	Reynolds number (diameter)
x	Coordinate
a	Acceleration
θ	Rotation angle
τ	Moment

Variables with units

Re_D	Reynolds number (diameter)	$[-]$
x	Coordinate	$[\mathrm{m}]$
a	Acceleration	$[\mathrm{m/s^2}]$
θ	Rotation angle	$[\mathrm{rad}]$
τ	Moment	$[\mathrm{N\cdot m}]$

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2 Implementation: stb-nomencl

Identification

```
1 ⟨*pkg⟩
2 \NeedsTeXFormat{LaTeX2e}[1999/12/01]
3 \ProvidesPackage{stb-nomencl}[2023/01/20
4                               v1.0
5                               Stellenbosh Thesis Nomenclature (DNJ ELS)]
```

External packages

```
6 \RequirePackage{calc}
```

```
    \STBN@tdima
\STBN@NomGrpSep
7 \newlength{\STBN@tdima}
8 \newlength{\STBN@NomGrpSep}
```

```
     \NomGrpSep
     \NomItmSep
     \NomItmMrg
     \NomLblSep
9 \newlength{\NomGrpSep}
10 \newlength{\NomItmSep}
11 \newlength{\NomItmMrg}
12 \newlength{\NomLblSep}

13 \setlength{\NomGrpSep}{\baselineskip}
14 \setlength{\NomItmSep}{\smallskipamount}
15 \setlength{\NomItmMrg}{1em}
16 \setlength{\NomLblSep}{1em}
```

```
   \NomGrpLabel
17 \newcommand{\NomGrpLabel}[1]{\textbf{#1}}
```

```
\STBN@NomGrpSep
18 \setlength{\STBN@NomGrpSep}{0pt}
```

```
      \NomGroup
19 \newcommand\NomGroup[1]{%<-Group Headings
20   \vspace{\STBN@NomGrpSep}%
21   \setlength{\STBN@NomGrpSep}{\NomGrpSep}%
22   \item[\hspace*{-\NomItmMrg}\NomGrpLabel{#1}]}
```

```
      \NomLabel
23 \newcommand{\NomLabel}[1]{#1\hfil}
```

```
   Nomencl (env.)
24 \newenvironment{Nomencl}[1][2em]%<- Nomenclature list environment
25   {\list{}{%
26      \setlength{\labelwidth}{#1}%
27      \setlength{\labelsep}{\NomLblSep}%
28      \setlength{\itemindent}{0pt}%
29      \setlength{\leftmargin}{\labelwidth+\labelsep-\itemindent+\NomItmMrg}%
30      \setlength{\listparindent}{\parindent}%
31      \setlength{\itemsep}{\NomItmSep}%
```

```
      \setlength{\parsep}{\parskip}%
      \let\makelabel\NomLabel}}%
  {\endlist}
```

`\UnitLabel`

```
\newcommand*{\UnitLabel}[1]{~[\,\ensuremath{\mathrm{#1}}\,]}
```

`\UnitLabelWdth`

```
\newlength{\UnitLabelWdth}
\setlength{\UnitLabelWdth}{2cm}
```

`\UnitLine`

```
\newcommand{\UnitLine}[3][\UnitLabelWdth]{{%
    \setlength{\STBN@tdima}{#1}%
    \rightskip\STBN@tdima\relax
    \parfillskip -\rightskip
    \leavevmode
    {#2}\nobreak
    \leaders\hbox{$\m@th\mkern \@dotsep mu\hbox{\tiny.}\mkern \@dotsep mu$}%
    \hfill
    \nobreak
    \makebox[\STBN@tdima][l]{\UnitLabel{#3}}%
}}
```

⟨/pkg⟩

The end of this package.

Change History

v1.0

General: Initial version 1