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usnomenc1.sty*

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

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*This document corresponds to usnomenc1 v1.1, dated 2008/05/30.

1 USnomenc1

1.1 Introduction

The USnomenc1 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{usnomenc1}
```

1.2 Macros

Nomenclature environment

The package provides the Nomenc1 list environment to typeset lists of symbols.

```
\begin{Nomenc1}[\langle Label width \rangle]
  \langle Nomenclature entries \rangle
\end{Nomenc1}
```

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

Headings

Headings can be set with the \NomGroup command.

```
\NomGroup{\langle Heading \rangle}
```

Lines with units declarations

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

```
\UnitLine[\langle unit width \rangle]{\langle description \rangle}{\langle unit \rangle}
```

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 S1style package, then

```
\renewcommand*{\UnitLabel}[1]{~[\, \SI{}{#1}\,]}
```

1.3 Example of usage

An example of the input of a list of symbols is

```

\begin{Nomencl}[2em]
\NomGroup{Constants}
  \item[ $\pi =$ ] 3.141\,592\,654
  \item[ $\mathrm{e} =$ ] 2.718\,281\,828

\NomGroup{Variables}
  \item[ $\mathit{Re}_D$ ] Reynolds number (diameter)

  \item[ $x$ ] Coordinate
  \item[ $a$ ] Acceleration \\\
  \item[ $\theta$ ] Rotation angle
  \item[ $\tau$ ] Moment

\NomGroup{Variables with units}
  \item[ $\mathit{Re}_D$ ] \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

$\pi =$ 3.141 592 654
 $e =$ 2.718 281 828

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 [m]
 a Acceleration [m/s²]

 θ Rotation angle [rad]
 τ Moment [N·m]

2 Implementation: USnomenc1

Identification

```
1 (*pkg)
2 \NeedsTeXFormat{LaTeX2e}[1999/12/01]
3 \ProvidesPackage{usnomenc1}[2008/05/30]
4                               v1.1
5                               Stellenbosh Thesis Nomenclature (DNJ ELS)]
```

External packages

```
6 \RequirePackage{calc}

\USN@tdima
\USN@NomGrpSep 7 \newlength{\USN@tdima}
8 \newlength{\USN@NomGrpSep}

\NomGrpSep
\NomItmSep 9 \newlength{\NomGrpSep}
\NomItmMrg 10 \newlength{\NomItmSep}
\NomLblSep 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}}

\USN@NomGrpSep
18 \setlength{\USN@NomGrpSep}{0pt}

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

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

Nomenc1
24 \newenvironment{Nomenc1}[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}%
32     \setlength{\parsep}{\parskip}%
33     \let\makelabel\NomLabel}}%
34   {\endlist}}
```

`\UnitLabel`

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

`\UnitLabelWdth`

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

`\UnitLine`

```
38 \newcommand{\UnitLine}[3][\UnitLabelWdth]{%
39   \setlength{\USN@tdima}{#1}%
40   \rightskip\USN@tdima\relax
41   \parfillskip -\rightskip
42   \leavevmode
43   {#2}\nobreak
44   \leaders\hbox{$\m@th\mkern \@dotsep mu\hbox{\tiny.}\mkern \@dotsep mu$}%
45   \hfill
46   \nobreak
47   \makebox[\USN@tdima][1]{\UnitLabel{#3}}%
48 }
```

```
49 </pkg>
```

The end of this package.

Change History

v1.0		v1.1
General: Initial version	1	General: Add unit lines
v1.0a		
General: Documentation changes . . .	1	