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(54) Title (EN): POWER CONVERSION DEVICE

(54) Title (FR): DISPOSITIF DE CONVERSION D'ÉNERGIE

(54) Title (JA): 電力変換装置

(57) Abstract:

(EN): A capacitor (C) has a parasitic inductance component (Lp), and is electrically connected between a positive electrode line (PL1) and a negative electrode line (NL). A converter (10) includes a reactor (Lc) that is provided on the positive electrode line (PL1), and is configured so as to convert a direct current voltage smoothed by a capacitor (C1). An inverter (20) is configured so as to perform DC-AC conversion between the converter (10) and an alternating current motor (M) by means of a switching control. The inductance of a path (PATH1) connecting the direct current power supply (B) and the capacitor (C) to each other, said path being a part of the positive electrode line (PL1), is smaller than the inductance of a path (PATH2) connecting the direct current power supply (B) and the capacitor (C) to each other, said path being a part of the negative electrode line (NL). The difference between the inductance of the path (PATH2) and the inductance of the path (PATH1) is smaller than double the parasitic inductance component (Lp).

(FR): Un condensateur (C) a une composante d'inductance parasite (Lp), et est électriquement connecté entre une ligne d'électrode positive (PL1) et une ligne d'électrode négative (NL). Un convertisseur (10) comprend une bobine de réactance (Lc) qui est disposée sur la ligne d'électrode positive (PL1), et est configuré de façon à convertir une tension continue lissée par un condensateur (C1). Un onduleur (20) est configuré de façon à effectuer une conversion CC-CA entre le convertisseur (10) et un moteur à courant alternatif (M) au moyen d'une commande de commutation. L'inductance d'un trajet (PATH1) connectant l'un à l'autre l'alimentation en courant continu (B) et le condensateur (C), ledit trajet faisant partie de la ligne d'électrode positive (PL1), est inférieure à l'inductance d'un trajet (PATH2) connectant l'un à l'autre l'alimentation en courant continu (B) et le condensateur (C), ledit trajet faisant partie de la ligne d'électrode négative (NL). La différence entre l'inductance du trajet (PATH2) et l'inductance du trajet (PATH1) est inférieure au double de la composante d'inductance parasite (Lp).

(JA): コンデンサ(Ｃ)は、寄生インダクタンス成分(Ｌｐ)を有し、正極線(ＰＬ１)と負極線(ＮＬ)との間に電気的に接続される。コンバータ(１０)は、正極線(ＰＬ１)に設けられたリアクトル(Ｌｃ)を含み、コンデンサ(Ｃ１)により平滑化された直流電圧の電圧変換を行なうように構成される。インバータ(２０)は、コンバータ(１０)と交流モータ(M)との間での直流交流変換をスイッチング制御により行なうように構成される。正極線(ＰＬ１)のうち直流電源(Ｂ)とコンデンサ(Ｃ)とを結ぶ経路(ＰＡＴＨ１)のインダクタンスは、負極線(ＮＬ)のうち直流電源(Ｂ)とコンデンサ(Ｃ)とを結ぶ経路(ＰＡＴＨ２)のインダクタンスよりも小さい。経路(ＰＡＴＨ２)のインダクタンスと経路(ＰＡＴＨ１)のインダクタンスとの差は、寄生インダクタンス成分(Ｌｐ)の２倍未満である。

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