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Recuperador de calor a pellets preço

Recuperators recover heat from the furnace waste gases and convert it into usable heat that is put into the combustion air of a gas burner. They serve to pre-heat the unit, which in turn reduces the amount of fuel needed to heat the product. Compared to alternative methods, such as regenerative furnaces, the initial costs are lower. Recuperators can recover 70-80% of the waste heat, can pre-heat air up to 1200°F, increase flame temperature, and improve furnace efficiency. A failed or failing recuperator in a metallurgical furnace can cause significant loss of productivity and potential downtime. Understanding what causes a recuperator to fail is the first step in prevention, or at least a longer life cycle. A watchful eye for signs of potential issues is key. In the steel industry, the first rows of tubes generally bear the brunt of the impact of high temperatures and the most corrosion from particles in the stream that can cause erosion and corrosion. Often, changing the first row to a material with better thermal properties can add significant life to the recuperator. The first step towards a solution is a visual inspection. If the tube appears ‘green’ in color, sulfur is the culprit. We call it ‘green rot’. While it’s not the only cause of deterioration, it is a common one. Next, material analysis can be done to determine the changes in chemical composition of the tube. Nickel alloys in the tubes can become deteriorated by sulfur (or other corrosive elements) in the gas stream. This can destroy the nickel alloy quickly. Often there is a scale that has trapped some of the corrosive elements and that accelerates the deterioration. Higher Chromium content in the replacement tubes will enhance the corrosion resistance. Adding Aluminum to the metallurgy of the tube can help form a tenacious surface that resists oxidation. We also look at the grain size of the material. Changes from the standard ASTM 4-6 to aught or 1 means the material is being exposed to temperatures beyond what they it can handle and is overheating. Again, a change in material composition might be suggested. Downtime due to a failed recuperator can have a devastating effect on productivity and profitability. So the faster a recuperator bundle can be replaced, the better. Alloy Engineering pioneered a removable module that can replace the first few rows of tubes, which is where the corrosion attack has the greatest impact. This reduces downtime, as well as the cost of replacing the entire recuperator. Alloy Engineering is always available to do an on-site inspection to evaluate the conditions of recuperators and determine the cause of failure or make recommendations on material changes. Pular para o conteúdo Product Engineering & Fabrication, Process Mechanical & Thermal Engineering, Outstanding Workmanship, Process Uptime at the Lowest Cost Per Hour Our Products Contact Us Alloy Engineering is proud to be awarded as a NorthCoast 99 winner two years in a row. top of page© 2024 POR AQUECIFOZ, LDA.+ 351 233 413 281 (chamada para a rede fixa nacional)bottom of page This question is for testing whether you are a human visitor and to prevent automated spam submission. Audio is not supported in your browser. What code is in the image? Your support ID is: 11649163261808169O8 . Início / AQUECIMENTO A AR / Recuperador Pellets para aquecimento a ar / Recuperador de calor a Pellets Ecoforest – Eco I 13,5kW Recuperador de calor a pellets ecoforest, modelo encastrável para lareiras já existentes, ajustável em altura e largura. Aquecem areas até 125m². Este recuperador de calor com uma ampla visão do fogo, converte qualquer lareiras a lenha normal numa fonte de calor mais eficaz e sem cheiros ou fumos. Existe uma alternativa em Salamandra para quem não tenha lareira. Destaques Regulação automática do ar de combustão, alimentação de pellets e caudal de ar Controlo electrónico exclusivamente desenvolvida pela Ecoforest Controlo via WiFi e Internet Controlo e programação por temperatura ambiente ou por potência Policombustível (pellets, cascas de amêndoa, caroço de azeitona) Sistema de limpeza por vácuo Múltiplos sistemas de segurança Queimador em aço inoxidável Permutador de tubos em inox Lareira em aço inoxidável Características Técnicas Dimensões L630 × A770 × P520 Capacidade de Depósito 20 Kg Peso 105 Kg Potência 13,5 Kw Rendimento 85% Superficie a aquecer 125m² Consumo pellets min/max 1500 / 3.200 gr/h Autonomia min/máxima 6 h / 14 h Combustivel Pellets Saída de Gases Ø 80 mm O combustível pellets, é uma fonte de energia "limpa". Os pellets são pequenos cilindros de madeira seca prensada (usualmente serrim e estilha provenientes da industria da serração e resíduos da exploração florestal), com valores restritos e controlados de humidade, resina e àgua. Recomendamos que utilize sempre pellets certificados pelas normas EnPlus - A1 (EN 14961-2) ou DINplus, que lhe garantem o melhor aquecimento, mais economia e uma vida longa ao seu equipamento. A gama de recuperadores a pellets apresenta 3 tipos de abastecimento: por gaveta frontal (Earth), por extração completa do equipamento (Fire) e pela parede, com auxílio de um tubo (Wind). Todos os modelos possuem três aros de acabamento: três lados, quatro lados com 44 mm e quatro lados com 74 mm. O Wind permite ainda ventilação canalizada. Com as habituais comodidades dos equipamentos a pellets, tais como ligação ao seu smartphone, controlo remoto e display programável para aumentar o seu conforto. Sobre o Fornecedor: Compromisso SOLZAIMA, É acima de tudo uma forma de viver em equilíbrio. De adequar as atividades humanas, de maneira a que as sociedades possam preencher as suas necessidades e expressar o seu maior potencial no presente, preservando a biodiversidade e os ecossistemas naturais, por forma a garantir a existência de recursos para as gerações futuras. É neste contexto que a Solzaima concebe e projeta soluções e equipamentos "movidos" a biomassa como fonte primária de energia. É o contributo da Solzaima a sustentabilidade do planeta - uma alternativa economicamente viável e amiga do ambiente, salvaguardando as boas práticas de gestão ambiental de forma a garantir um eficiente gestão do ciclo de carbono. A madeira é considerada energia solar armazenada, sendo os seus componentes: água, luz solar e dióxido de carbono. A madeira só liberta (durante a queima) a quantidade de dióxido de carbono que esta extraiu do ar enquanto ser vivo, recuperando-o quimicamente enquanto árvore. Contudo, é indiferente se a madeira apodrece na floresta ou é utilizada para aquecimento doméstico. A libertação de dióxido de carbono será sempre a mesma, durante o seu período de vida ou durante o processo de queima. O dióxido de carbono libertado durante o processo de combustão é absorvido posteriormente pelas restantes árvores, criando assim um ciclo natural de absorção de dióxido de carbono, isto é, carvão neutro. A energia é um elemento fundamental da sociedade e da economia e a força motriz por de trás de quase tudo o que nos rodeia. O aumento do preços das energias fósseis (petróleo, carvão e os seus derivados) que se verificou nos últimos anos, tornou óbvia uma dependência excessiva face a esse tipo de energias. As consequências da sua utilização são já sobejamente conhecidas de todos. A sociedade e o planeta requerem fontes de energia "limpas" de ponto de vista ambiental e produzidas de uma forma sustentada, para garantir a qualidade de vida e o futuro das gerações vindouras. A biomassa apresenta-se como uma excelente alternativa. Fonte de energia renovável, derivada de material biológico natural, tais como madeira (lenha) ou resíduos florestais vários (pellets). Um dos elementos mais utilizados para a produção de energia biomassa é a madeira. fruto da existência de um extenso parque florestal e da necessidade de anualmente efetuar cortes e limpezas, de forma a manter uma floresta saudável, temos um abastecimento florestal contínuo, a preços competitivos e estáveis, mantendo e garantindo a sustentabilidade e o futuro saudável das nossas florestas. A biomassa é já bastante usada na produção de calor, apesar do seu potencial ter ainda muito por onde explorar. Apenas 4% das necessidades energéticas europeias são satisfeitas com este tipo de energia. ECONOMIA Os combustíveis Lenha e Pellets são hoje a fonte de combustível mais económica para o aquecimento da sua habitação, o que permite pagar o investimento nos equipamentos de aquecimento a biomassa em muito pouco tempo. A figura seguinte mostras as diferenças de custo por KW entre os diversos combustíveis para aquecimento, tomando como referência o custo por KW da lenha. Pode facilmente verificar a poupança que obtemos quando utilizamos a biomassa (lenha ou pellets) em detrimento das restantes formas de combustível para aquecimento. Special purpose heat exchanger This article is about the heat exchanger. For the artillery term, see Glossary of British ordnance terms § Recuperator. This article includes a list of general references, but it lacks sufficient corresponding inline citations. Please help to improve this article by introducing more precise citations. (March 2016) (Learn how and when to remove this message) Types of recuperator, or cross plate heat exchanger A recuperator (electro- end carbogidro-) - is a special purpose counter-flow energy recovery heat exchanger positioned within the supply and exhaust air streams of an air handling system, or in the exhaust gases of an industrial process, in order to recover the waste heat. Generally, they are used to extract heat from the exhaust and use it to preheat air entering the combustion system. In this way they use waste energy to heat the air, offsetting some of the fuel, and thereby improve the energy efficiency of the system as a whole. In many types of processes, combustion is used to generate heat, and the recuperator serves to recuperate, or reclaim this heat, in order to reuse or recycle it. The term recuperator refers as well to liquid-liquid counterflow heat exchangers used for heat recovery in the chemical and refinery industries and in closed processes such as ammonia-water or LiBr-water absorption refrigeration cycle. Recuperators are often used in association with the burner portion of a heat engine, to increase the overall efficiency. For example, in a gas turbine engine, air is compressed, mixed with fuel, which is then burned and used to drive a turbine. The recuperator transfers some of the waste heat in the exhaust to the compressed air, thus preheating it before entering the fuel burner stage. Since the gases have been pre-heated, less fuel is needed to heat the gases up to the turbine inlet temperature. By recovering some of the energy usually lost as waste heat, the recuperator can make a heat engine or gas turbine significantly more efficient. Normally the heat transfer between airstreams provided by the device is termed as "sensible heat", which is the exchange of energy, or enthalpy, resulting in a change in temperature of the medium (air in this case), but with no change in moisture content. However, if moisture or relative humidity levels in the return air stream are high enough to allow condensation to take place in the device, then this will cause "latent heat" to be released and the heat transfer material will be covered with a film of water. Despite a corresponding absorption of latent heat, as some of the water film is evaporated in the opposite airstream, the water will reduce the thermal resistance of the boundary layer of the heat exchanger material and thus improve the heat transfer coefficient of the device, and hence increase efficiency. The energy exchange of such devices now comprises both sensible and latent heat transfer; in addition to a change in temperature, there is also a change in moisture content of the exhaust air stream. However, the film of condensation will also slightly increase pressure drop through the device, and depending upon the spacing of the matrix material, this can increase resistance by up to 30%. If the unit is not laid to falls, and the condensate not allowed to drain properly, this will increase fan energy consumption and reduce the seasonal efficiency of the device. In heating, ventilation and air-conditioning systems, HVAC, recuperators are commonly used to re-use waste heat from exhaust air normally expelled to atmosphere. Devices typically comprises a series of parallel plates of aluminium, plastic, stainless steel, or synthetic fiber, copper alternate pairs of which are enclosed on two sides to form twin sets of ducts at right angles to each other, and which contain the supply and extract air streams. In this manner heat from the exhaust air stream is transferred through the separating plates, and into the supply air stream. Manufacturers claim gross efficiencies of up to 95% depending upon the specification of the unit. The characteristics of this device are attributable to the relationship between the physical size of the unit, in particular the air path distance, and the spacing of the plates. For an equal air pressure drop through the device, a small unit will have a narrower plate spacing and a lower air velocity than a larger unit, but both units may be just as efficient. Because of the cross-flow design of the unit, its physical size will dictate the air path length, and as this increases, heat transfer will increase but pressure drop will also increase, and so plate spacing is increased to reduce pressure drop, but this in turn will reduce heat transfer. As a general rule a recuperator selected for a pressure drop of between 150–250 pascals (0.022–0.036 psi) will have a good efficiency, while having a small effect on fan power consumption, but will have in turn a higher seasonal efficiency than that for physically smaller, but higher pressure drop recuperator. When heat recovery is not required, it is typical for the device to be bypassed by use of dampers arranged within the ventilation distribution system. Assuming the fans are fitted with inverter speed controls, set to maintain a constant pressure in the ventilation system, then the reduced pressure drop leads to a slowing of the fan motor and thus reducing power consumption, and in turn improves the seasonal efficiency of the system. Recuperators have also been used to recover heat from waste gasses to preheat combustion air and fuel for many years by metallic recuperators to reduce energy costs and carbon footprint of operation. Compared to alternatives such as regenerative furnaces, initial costs are lesser, there are no valves to be switching back and forth, there are no induced-draft fans and it does not require a web of gas ducts spread up all over the furnace. Historically the recovery ratios of recuperators compared to regenerative burners were low. However, recent improvements to technology have allowed recuperators to recover 70-80% of the waste heat and pre-heated air up to 850–900 °C (1,560–1,650 °F) is now possible. Cutaway of a recuperated microturbine Recuperators can be used to increase the efficiency of gas turbines for power generation, provided the exhaust gas is hotter than the compressor outlet temperature. The exhaust heat from the turbine is used to pre-heat the air from the compressor before further heating in the combustor, reducing the fuel input required. The larger the temperature difference between turbine out and compressor out, the greater the benefit from the recuperator. [1] Therefore, microturbines (